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Towards Observational Measurement of Social Competence in Youth with Chronic Health Conditions: Development of Peer Interaction Scales for Youth with Spina Bifida

Christina E. Holbein
Loyola University Chicago

LOYOLA UNIVERSITY CHICAGO

TOWARDS OBSERVATIONAL MEASUREMENT OF SOCIAL COMPETENCE IN YOUTH WITH CHRONIC HEALTH CONDITIONS: DEVELOPMENT OF PEER INTERACTION SCALES FOR YOUTH WITH SPINA BIFIDA

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CHRISTINA EHRMAN HOLBEIN

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INTRODUCTION

General Overview

Social competence is defined as "effective functioning within social contexts" (Cavell, 1990, p. 111) and is composed of social outcomes, social skills, and actual social behavior. The value of studying children's social competence has been well-established (Dirks, Treat, & Weersing, 2007; Hartup, 1989; Hops, 1983), insofar as deficits in social competence have been linked with many maladaptive developmental outcomes, such as poorer school adjustment (Ladd, Kochenderfer, & Coleman, 1997), lower vocational competence (Bagwell, Newcomb & Bukowski, 1998), and increased rates of externalizing and internalizing problems (DeRosier, Kupersmidt, & Patterson, 1994). In pediatric populations, social competence has become an area of interest, as children with various health conditions have demonstrated difficulties in their peer interactions (McCarroll, Lindsey, MacKinnon-Lewis, Chambers, & Frabutt, 2009; Ellerton, Stewart, Richie, & Hirth, 1996). Thus, children with health problems may be at risk for negative social outcomes. Further research is required to understand the complex relationships between chronic illness, social competence, and long-term adjustment. This study aims to improve the measurement of dyadic peer interactions between children with a chronic health condition and their peers by creating scales from observational data and examining associations between observational measures of social competence and relevant

associations between observational measures of social competence and relevant questionnaires and interviews.

Spina bifida (SB) is a chronic health condition that is associated with a broad range of difficulties for affected children. It is a congenital birth defect caused by an incomplete closing of the spinal cord that occurs in early gestation. It can result in complications of varying severity, such as gait impairments requiring braces and/or wheelchair use, neurological impairments, hydrocephalus, bowel and urinary difficulties, and frequent surgeries. SB is relatively common, occurring in approximately 3 out of every 10,000 live births (Centers for Disease Control and Prevention [CDC], 2010). Specifically, research has suggested that children with SB encounter social deficits throughout development (Blum, Resnick, Nelson, & St. Germaine, 1991; Ellerton et al., 1996; Holmbeck et al., 2010). For example, they tend to be more socially isolated than healthy children in school settings (Tin & Teasdale, 1985). Children with more severe forms of the condition are at risk for lower social competence (Tew & Laurence, 1985; Hirst, 1989), particularly relating to activity levels and athletic competence (Hommeyer, Holmbeck, Wills, & Coers, 1999).

While past pediatric studies have focused on general measures of social functioning, less is known about the close friendships between children with chronic illnesses and their peers (La Greca & Bearman, 2000; La Greca, Bearman, & Moore, 2002), including children with SB. Further investigation is crucial because the quality of children's friendships has been found to be a predictor of emotional well-being (Parker &

Asher, 1993) and school adjustment (Ladd et al., 1997). More knowledge in this area may help to uncover the positive effects of friendships on pediatric health conditions. Furthermore, analysis of specific peer relationships provides unique information that is not tapped by general social competence questionnaire measures (Parker & Asher, 1993; Ladd, 1999).

The use of multiple informants has become the "gold standard" in child and adolescent research (Renk, 2005) when attempting to reduce the impact of shared method variance (La Greca & Lemanek, 1996; Holmbeck, Li, Schurman, Friedman, & Coakley, 2002a). Agreement between informants is often low to moderate, suggesting that each informant provides a unique perspective concerning an individual's behavior (Achenbach, McConaughy, & Howell, 1987; Achenbach, 2006). While researchers may choose to avoid multi-informant methods due to the complexity that arises from discrepancies between informants, such differences may in fact be meaningful as predictor or criterion variables (Holmbeck et al., 2002a). The assessment of social competence using multiple informants is particularly critical, as different settings provide unique opportunities for demonstration of social adjustment and social skills (La Greca & Lemanek, 1996). While parent report is often relied upon in pediatric settings, social information provided by parents may not be consistent with observed behaviors or reports from other informants. In one study, mothers of brain tumor survivors reported that their children had more social problems than healthy peers, while teachers and children reported no such differences (Radcliffe, Bennett, Kazak, Foley, & Phillips, 1996). Lemanek, Horwitz, & Ohene-Frempong (1994) found that mothers' ratings of social

competence in their children with sickle cell disease were higher than those of clinic staff members.

In addition to the lack of multi-informant research, many contemporary studies fail to incorporate multiple methods in their protocols (Holmbeck et al., 2002a). Although questionnaire data is efficient, cost-effective, and informative, other methods should be considered for the supplementary knowledge they may contribute. Even with multiple informants, exclusive reliance on self-report questionnaire data introduces bias and potentially inaccurate information due to difficulties in memory recall. Observational data collection may be particularly helpful in the study of social competence. Observations of dyadic interactions can elicit demonstrations of certain social skills and behaviors that are not easily assessed with questionnaires (Dirks et al., 2007). Observational data collection is unique because it introduces both another method (i.e., observation) and another informant (i.e., the trained observer; Holmbeck et al., 2002a). These observers may add valid information in the measurement of social competence in youth with chronic health conditions.

While observational methods were often employed in early studies of social functioning in typically developing children (Lougee, Grueneich, & Hartup, 1977; Grotevant & Cooper, 1985), they are less common in recent pediatric research. In fact, one study found that only 18% of studies published in the *Journal of Pediatric Psychology* featured observational methods (Holmbeck et al., 2002a). Recent studies have focused more on observation of family functioning (Holmbeck, Coakley, Hommeyer, Shapera, & Westhoven, 2002b; Holmbeck et al., 2003; Moens, Braet, &

Soetens, 2007; Kaugars et al., 2011), with less emphasis on peer relationships (Kapp-Simon & McGuire, 1997; Katz, Leary, Breiger, & Friedman, 2011). Future studies of pediatric social competence would benefit from the addition of observational methods used in concert with questionnaires, medical chart reviews, and school grade reports.

The purpose of this study was to create reliable and valid second-order peer interaction scales from data obtained via observational methods in the measurement of social competence in children with SB. These scales were constructed from items that had been coded by trained raters who observed structured tasks between children with SB and their close friends. Then, associations between these scales and questionnaires completed by parents, teachers, and children were examined, providing an evaluation of the validity of these observational measures as indicators of social competence. This study also addresses several shortcomings in the literature. First, in response to La Greca and Bearman's (2000) call for increased attention to close friendships between children with health conditions and their peers, observed social interactions of target child-close friend dyads were examined. Second, the reliability and validity of observational measures in the assessment of social competence were explored. To date, there is limited evidence on the validity of such methods in the pediatric literature, and this is the first study that examines the utility of observational data in the study of peer interactions for children with SB. Because observational measures of social interactions were examined in relation to questionnaire and interview measures of social competence, increased knowledge about the validity of data derived from observational methods was anticipated.

In the following review of the literature, the study of social competence and friendships, especially within pediatric populations, will be explored. Next, justification for the constructs assessed by the proposed scales is presented. Also, the validity and previous utilization of observational data collection methods for children with and without chronic health conditions will be reviewed. Finally, hypotheses supported by the relevant literature will be presented.

Social Competence in Typically-Developing Children

Interest in children's social competence first became evident in studies from the 1930s aimed at children's peer group status (Ladd, 1999). Since then, it has become an increasingly prevalent topic across the developmental, clinical child, and pediatric psychology fields. This increased interest may be a product of our growing knowledge that social competence has both short-term and long-term implications for children's emotional health and well-being (Hartup, 1989; Bagwell, et al., 1998). In fact, social difficulties are a common thread among children referred to mental health clinics (Achenbach & Edelbrock, 1981). Academically, youth's social competence has a direct relationship with lower absenteeism (DeRosier, et al., 1994) and higher achievement (Wentzel, 1991; Green, Forehand, Beck, & Vosk, 1980). Social competence has been linked with more positive mental health outcomes as well (Segrin, 2000; Zimmer-Gembeck, Hunter, & Pronk, 2007). Studies have found negative associations between social competence and the development of internalizing symptoms in children and adolescents (Cole, Martin, Powers, & Truglio, 1996; Ladd & Troop-Gordon, 2003; Hymel, Rubin, Rowden, & LeMare, 1990). Moreover, social competence has effects that

carry on into adulthood. In a study by Bagwell et al. (1998), peer rejection that occurred in 5th grade was negatively related to vocational abilities, aspiration level, and social involvement. A lack of friends in childhood also predicted depressive symptomology in adulthood. Other studies have also found relationships between social difficulties in childhood and internalizing problems in adolescence and adulthood (Burt, Obradovic, Long, & Masten, 2008; Modin, Oestberg, & Almquist, 2011). Evidently, the study of social competence has demonstrated its importance throughout development and is a key area around which interventions may be developed.

Social Competence in Pediatric Populations

Children with chronic health conditions often experience greater difficulties in their peer relationships. In contrast with healthy children, such children endure intrusive treatments, physical pain, and fears of future health complications and death. Their increased need for both physical and emotional care can put a strain on family functioning. Children with chronic health conditions may also struggle socially due to cognitive impairments and the stigma associated with visible physical disabilities (Wallander & Varni, 1998; Perlman & Routh, 1980), although these challenges may not be relevant for all health conditions. Their increased risk of both internalizing and externalizing symptoms (Lavigne & Faier-Routman, 1992) put them at a further disadvantage in social contexts. Taken together, children with chronic illnesses may feel they do not "fit in" with their healthy peers because their lives have such different demands (La Greca, 1990).

Empirical studies have demonstrated differences in the social competence of

children with chronic illnesses and their healthy peers. The noncategorical approach compares healthy children with a sample of children across a variety of chronic illnesses. This method is supported by a study by Stein & Jessop (1989) that found that psychological and social variables did not significantly differ between multiple pediatric illnesses. In a study by McCarroll et al. (2009), teachers reported less prosocial behaviors and less overt, relational aggression in their students with chronic illnesses compared to their healthy classmates. The children with chronic illnesses also reported spending less time with peers and having overall higher levels of social anxiety. Meijer et al. (2000) described similar findings. Children with chronic illnesses differed from their healthy peers with lower self-reported aggression, prosocial behaviors, and parent-reported assertiveness; however, they did not find differences in social anxiety. Healthy children have also reported larger social support and peer networks than children with chronic health conditions (Ellerton et al., 1996). Most recently, a meta-analysis of 57 studies revealed a small effect size indicating that children with chronic illnesses exhibited greater social competence deficits than healthy comparison children (Martinez, Carter, & Legato, 2011).

The other approach to studying differences between pediatric populations and their healthy peers focuses on samples of children from a specific health condition population. The rationale for this approach is based on the notion that each health condition produces a unique set of challenges and circumstances for children. Meta-analytic techniques provide support for varying levels of social impairment across health conditions (Martinez et al., 2011). Childhood cancer survivors make up one population

that has received particular attention in this literature, with studies of social competence yielding mixed results. Mulhern, Wasserman, Friedman, and Fairclough (1989) found substantial differences in social competence measures between leukemia survivors and healthy children. Vannatta, Gartstein, Short, & Noll (1998) also observed relative social difficulties in brain tumor survivors; their sample of children received fewer best friend nominations by their classmates and was rated higher in social isolation by their teachers, peers, and themselves. However, Kazak and colleagues (1997) failed to find any differences in social functioning between cancer survivors and their healthy peers. In fact, in some studies, childhood cancer survivors exhibited greater social competence than healthy comparisons (Noll, Gartstein, Vannatta, Correll, Bukowski, & Davies, 1999; Reiter-Purtill, Vannatta, Gerhardt, Correll, & Noll, 2003).

Research focusing on social competence in children with craniofacial deformities is particularly relevant to SB research because both health conditions produce visible physical manifestations that distinguish these children from their healthy counterparts. A majority of research on the social competence of children with craniofacial defects has revealed the presence of social difficulties, although this is not always the case. This population may be particularly at risk due to the observable physical defects inherent to their health conditions. Confirming this assumption, both Murray et al. (2010) and Kapp-Simon and McGuire (1997) found that adolescents with a craniofacial deformity were more likely to take a passive role in social situations and had shorter, less positive social interactions compared to their peers. Children with such facial anomalies were also more introverted and reported by parents to have more negative social interactions (Pertschuk

& Whitaker, 1985). In contrast, no significant differences in social competence were found between a sample of preadolescents in this population and comparisons (Pope & Ward, 1997). Thus, it is not yet clear if craniofacial defects negatively effect social functioning for affected youth.

Social competence in children with health conditions such as epilepsy and cerebral palsy are also notable due to the shared neurocognitive component with SB. In fact, a recent meta-analysis revealed large effect sizes of social competence impairment in children with central nervous system disorders (e.g., spina bifida, epilepsy, etc.); this large effect was greater than effect sizes computed for all other health conditions studied (e.g., obesity, blood disorders, diabetes, etc.; Martinez et al., 2011). Similar to the health conditions already described, evidence of social difficulties in children with epilepsy is mixed. Kokkonen, Kokkonen, Saukkonen, and Pennanen (1997) found that young adults with childhood onset of epilepsy were more likely to have social problems than healthy peers. Within the sample of children with epilepsy, those with learning disabilities and other intellectual deficits were most at risk for social problems. Lower social competence for youth with epilepsy in comparison to healthy children (Apter, Aviv, Kaminer, Weizman, Lerman, & Tyano, 1991) and children with other chronic illnesses (Eiser, Havermans, Pancer, & Eiser, 1992) have been found in other studies as well. Alternatively, when cognitive status was controlled, Caplan et al. (2005) failed to find differences in social competence between children with epilepsy and their peers. These studies suggest that youth with epilepsy who have higher levels of neurological impairment may be most at risk for social difficulties. Furthermore, children with

cerebral palsy are more likely to be victimized by other children, with girls especially struggling with social adjustment (Nadeau & Tessier, 2009). They do not socialize with friends outside of school as often as typically-developing children and are less likely to participate in organized activities (Blum et al., 1991). A review of the limited number of studies on interpersonal relationships in adolescents and young adults with cerebral palsy revealed less social activity than peers as well (Wiegerink, Roebroeck, Donkervoort, Stam, & Cohen-Kettenis, 2006). Thus, more information is needed related to social competence in children with health conditions that frequently result in neurocognitive problems.

Many other chronic health problems have been studied in relation to social competence. Social difficulties have also been found for children with diabetes (Helgeson, Reynolds, Shestak, & Wei, 2006), sickle cell disease (Rodrigue, Streisand, Banko, Kedar, & Pitel, 1996; Noll, Vannatta, Koontz, Kalinyak, Bukowski, & Davies, 1996), Tourette's disorder (Stokes, Bawden, Camfield, Backman, & Dooley, 1991), juvenile rheumatoid arthritis (Feldmann, Weglage, Roth, Foell, & Frosch, 2005), and inflammatory bowel disease (Engstrom, 1992; Mackner & Crandall, 2006), among others. However, not all studies find such differences. For two of the conditions above, no significant social differences were apparent between healthy peers and children with sickle cell disease (Lemanek et al., 1994) and juvenile rheumatoid arthritis (Reiter-Purtill, Gerhardt, Vannatta, Passo, & Noll, 2003). There is clearly controversy across disorders regarding the presence, or lack thereof, of social problems in youth with chronic health conditions and their peers. This may be a result of methodological issues, such as

exclusive reliance on one reporter and/or method of data collection as well as the use of measures that assess different facets of social competence across studies. Further controlled studies employing strong methods and multiple informants are necessary to answer the questions related to social competence in youth with chronic health conditions.

Social Competence in Children with Spina Bifida

SB may place children at a particular social disadvantage because it limits mobility, often impairs neurocognitive ability, and results in multiple physical differences that are easily apparent to others (such as short stature, reliance on diapers, and unusual gait). In fact, children with SB are often teased or left out of activities by their peers due to their disability (Roux, Sawin, Bellin, Buran, & Brei, 2007). Youth with SB tend to have friends who are younger, and they are less likely to participate in active, organized activities with friends (Blum, et al., 1991). As adolescents, they report difficulties feeling connected with their peers and they tend to rely on adults for much of their social interaction (Roux et al., 2007). Adolescents have also reported occasional feelings of hopelessness associated with their social isolation outside of school (Dorner, 1976).

Many studies have demonstrated that children with SB are lower in social competence compared to their typically developing peers. Parents reported that their children with SB experienced more social problems than do typically developing children (Wallander, Feldman, & Varni, 1989). Children with SB also had fewer close friendships than healthy children; in fact, children with SB associated with the fewest number of friends even when compared with children with either diabetes or cerebral palsy (Ellerton

et al., 1996). Children with the most common form of the disorder, meningomyelocele (MM), also reported lower peer relations scores than a healthy control group (Mueller-Godeffroy, Michael, Poster, Seidel, Schwarke, & Thyen, 2008). In comparison to their typically developing peers, Holmbeck et al. (2003) found that children with SB were more passive, associated with friends less often outside of school, and were more socially immature. It should be noted that differences in social competence may be stable over time. In a longitudinal six-year study, children with SB had fewer friends compared to able-bodied children (Holmbeck et al., 2010). There was also a trajectory of lower social acceptance as reported by girls over time.

Along with the variation in social functioning across physical conditions, there is great variability within each disorder as well (Wallander et al., 1989). This is especially relevant to disorders in which there is significant heterogeneity, such as SB. Therefore, it is imperative to examine characteristics specifically related to SB. Condition severity has been a particular area of interest within the SB literature. Although not a pure measure of severity, lower executive function in adolescence predicted number of friends in one sample of young adults with SB (Zukerman, Devine, & Holmbeck, 2011). Among children with SB, those with shunts appear to be at the highest risk for further difficulty (Hommeyer et al., 1999). This effect was indirect; children with a shunt were more likely to encounter academic and concentration difficulties, which were then associated with less social competence. However, other indicators of condition severity, such as lesion level, SB classification, number of shunt surgeries, and ambulation status, were not related to social competence or adjustment. Wallander et al. (1989) also failed to find

differences in social competence across level of severity.

Moreover, social difficulties are not evident in all studies of youth with SB. There were no differences in a measure of social acceptance between young adolescents with SB and their peers (Coakley, Holmbeck, & Bryant, 2005). Furthermore, emerging adults reported comparable numbers of friends to their peers without SB (Zukerman et al., 2011). Taken together, these findings may be attributed to differences in reporter (child vs. parent), such that parents are more aware of differences in overall social acceptance. More research is needed to determine whether or not social difficulties exist for youth with SB. Indeed, observational methods may provide an additional useful perspective on social functioning of youth with SB.

Friendships of Typically-Developing Children

In addition to overall social functioning, it is crucial to assess the characteristics of a child's close friendships with peers. In fact, friendships may uniquely contribute to a child's overall development and well-being (Hartup, 1996; Parker & Asher, 1993; Ladd et al., 1997). While peer acceptance generally reflects the perspectives of others in a child's social network, friendships are voluntary, dynamic relationships between two children (Gifford-Smith & Brownell, 2003). Indeed, the two concepts are not interchangeable; a child who is not well-liked by his or her overall peer group may still possess high-quality friendships, and a child who is accepted by his or her peers may lack high-quality friendships. Parker and Asher (1993) found that children who had low levels of peer acceptance had satisfactory friendships, although they were generally lower in quality than children who were more accepted by their peers. However, the mere

presence of such friendships is notable because children generally receive more support from their friends than peer acquaintances (Berndt & Perry, 1986). Nangle and colleagues (2003) also differentiated outcomes of friendships versus social status. Compared to overall popularity, interactions between pairs of friends had a greater influence on depression and loneliness.

Furthermore, friendships greatly impact children's overall adjustment and well-being (Bukowski, Hoza, & Boivin, 1994). Positive friendships have been associated with higher academic achievement (Berndt, 1999), more positive school adjustment (Wentzel, Barry, & Caldwell, 2004), and less loneliness (Sullivan, 1953). Hartup (1996) highlighted the support that friends provide during difficult developmental transitions. Children may reference their friends as social and cognitive resources. It has been suggested that close friendships aid in the development of interpersonal skills and learning, promote self-esteem (Sullivan, 1953; Bukowski, 2001), and decrease stress produced by difficult family events (Criss, Pettit, Bates, Dodge, & Lapp, 2002). Childhood friendships may also exert long-term effects on adult adjustment (Hartup & Stevens, 1997). In one longitudinal study, pre-adolescents with mutual friends reported greater self-worth and positive relationships with family members as adults (Bagwell et al., 1998). Alternatively, lack of a mutual friendship in preadolescence was associated with higher levels of externalizing behaviors and greater depressive symptoms. Positive friendships in childhood are also significant predictors of characteristics of later romantic relationships (Furman & Wehner, 1994; Connolly, Furman, & Konarski, 2000).

In addition to examining whether or not a child has friends, the quality of a child's

friendship(s) should be assessed, due to its influence on relevant developmental outcomes (Hartup & Stevens, 1997). In fact, research that examines associations between friendship status (i.e., whether a child has friends) and positive outcomes are often confounded by the connection between friendship quality and positive adjustment. Friendship quality has been directly linked to emotional well-being (Parker & Asher, 1993; Bukowski et al., 1994) and overall social competence (Berndt, 2002). Notably, the construct of friendship quality contains both positive characteristics (i.e., prosocial skills, self-esteem support, loyalty, etc.) and negative characteristics (i.e., conflict and bossiness; Berndt, 2002). Because friendships, and friendship quality in particular, have demonstrated unique impacts on functioning and adjustment, it is imperative to include measures of friendship quality in studies of social competence. Focusing exclusively on general peer acceptance, at the expense of examining the quality of dyadic relationships between children and their peers, may provide a limited conceptualization of the child's social functioning. Thus, in the current study, observational scales will be developed to better understand the characteristics of interactions between children with SB and their close friends.

Friendships in Pediatric Populations

Findings concerning the complex relationships between peer acceptance and friendship quality in typically-developing youth are an important jumping off point when attempting to understand peer relations in those with chronic health conditions. However, research on friendships in pediatric populations is scant. In fact, La Greca and Bearman (2000) have called for increased attention to the close friendships of children with chronic health conditions. They highlight two potential impacts of friends. First,

children's positive friendships may provide support that counteracts low peer acceptance and moderates the negative effects of chronic illness. In adolescents and young adults with cancer, peer support was associated with fewer depressive and anxiety symptoms (Corey, Haase, Azzouz, & Monahan, 2008). Supportive friendships also served as important sources of acceptance and support in adolescents with diabetes (La Greca & Thompson, 1998; Greco, Pendley, McDonell, & Reeves, 2001). On the other hand, children with a higher number of friends do not necessarily exhibit higher levels of global self-worth or lower levels of depressive symptoms (Appleton, Ellis, Minchom, Lawson, Boll, & Jones, 1997). More research is needed to better understand the relationships between friendships, peer acceptance, and psychological well-being in pediatric populations.

Second, La Greca & Bearman (2000) suggest that support from one's friends may improve adherence to complex medical regimens and facilitate overall disease adjustment. In children with diabetes, the influence of friends on disease management is still unclear. Friends can support adolescents with diabetes by encouraging positive lifestyle behaviors, such as exercising and accommodating dietary plans (La Greca & Thompson, 1998). Pleasant interactions between friends have also been associated with lower depressive symptoms and improved self-care, with conflict negatively related to self-care behaviors (Helgeson, Lopez, & Kamarck, 2009). However, other studies have failed to find a positive relationship between friendship characteristics and disease management (Pendley, Kasmen, Miller, Donze, Swenson, & Reeves, 2002), suggesting that friends may inadvertently encourage non-adherent behaviors when the child with the

health condition wants to act similarly to his or her friend. Additionally, friends may actually introduce risky health behaviors, such as substance use and sexual activity (La Greca, Prinstein, & Fetter, 2001). Continued investigation of the relationship between the role of friends and adherence is clearly needed.

While there is considerable research focused on differences in overall social competence between children with chronic health conditions and their healthy peers, the literature is relatively limited regarding friendship differences between groups. In general, children with health conditions appear to experience more difficulties with the number and quality of friendships, although this is not always the case. Childhood cancer survivors were less likely to have close friends and to confide in their friends (Barrera, Shaw, Speechley, Maunsell, & Pogany, 2005). They also demonstrated less engagement in their interactions with friends and more difficulties in their abilities to resolve conflict compared to healthy children (Katz et al., 2011). However, in another study, adolescents with diabetes reported higher numbers of close friends and emotional support from friends than their healthy peers (Helgeson, Reynolds, Shestak, & Wei, 2006), suggesting that youth with chronic health conditions may rely more on close friendships to help them manage day-to-day health struggles.

Furthermore, children with disabilities, including SB, spend less time with their friends outside of school (Holmbeck et al., 2003; Geisthardt, Brotherson, & Cook, 2002). This is particularly true for children with cognitive disabilities, an issue faced by many youth with SB. Devine and colleagues (2012) examined friendship differences in children with SB and their peers via self-report, finding that the former had fewer reciprocated

best friendships, less time spent with friends outside of school, less emotional support from friends, and lower friendship quality and closeness. It appears that the difficulties youth with SB face related to overall peer acceptance may also be evident within their close friendships. Further research will benefit from more comprehensive research methods that include observed interactions between children with SB and their friends. This study aims to generate validated scales derived from coded items of observed social interactions between youth with SB and their friends. In addition to introducing another source of information related to friendship characteristics and social competence, observational measures enable a closer look into components of friendships and interactions. Identifying social strengths and weaknesses in children with SB will provide guidance for the development of interventions aimed to improve social competence in these children. Enhanced measurement will also help to clarify the relationships between friendships, peer acceptance, psychological functioning, and medical adherence in youth with SB.

Observational Research Methods in Pediatric Psychology

The majority of studies in pediatric psychology rely solely on inexpensive, efficient questionnaire data collections to the exclusion of observational methods that require more labor and financial resources (Barakat, 2008). Furthermore, the majority of social competence assessments utilize a questionnaire format (Matson & Wilkins, 2009). However, exclusive reliance on questionnaire data, even when collected from multiple informants, introduces the problem of shared method variance (Holmbeck et al., 2002a; La Greca & Lemanek, 1996); as such, associations between variables may be

misattributed to true shared variance between constructs, when it is in fact a function of shared method variance or response bias. Observational methods introduce both a new method and a new informant into the research protocol, thereby greatly reducing the possibility that shared method variance can be an alternative explanation for significant findings (Holmbeck et al., 2002a). In fact, adding a new informant also increases the validity of findings because each informant may provide unique information related to the child's behavioral and emotional functioning (Renk, 2005; McConnell & Odom, 1999). Social competence is frequently assessed via child self-report and/or peers' self-reports, but previous studies have demonstrated that children may not always be the most accurate informants of their own social standing and friendships (Gifford-Smith & Brownell, 2003). Parents have also exhibited bias when reporting on their children's social functioning (Dodge et al., 1986) and frequently provide different responses than teachers (Noll et al., 1997; Colegrove & Huntzinger, 1994), children (Renk & Phares, 2004), and hospital clinic staff (Lemanek et al., 1994). Therefore, the objective observer may serve as another key source of information, with potentially less bias than sources that are well-acquainted with the child or adolescent (Gardner, 2000).

Furthermore, observational methods allow researchers to study distinct social skills and performance in social situations, two components of social competence that typically receive less attention in the literature (Cavell, 1990; Nassau & Drotar, 1997). Direct observation of the social interactions of children with chronic health conditions may capture unique information not obtained by questionnaire measures (Noll & Bukowski, 2012). In addition to concrete behaviors, more global measures of social

competence may be monitored as well (Holmbeck et al., 2003; Gifford-Smith & Brownell, 2003). Global constructs assess overarching features of the interaction instead of discrete, distinct behaviors and verbalizations that can be counted. For example, an observer may assess cohesion within the dyad or levels of dominance within an individual child by considering the overall sense of the interaction instead of summing the number of behaviors (Vaughn, Vollenweider, Bost, Azria-Evans, & Snider, 2003). Analyzing global features of a child's social interactions provides valuable information about the overall conceptualization of the friendship and the child's social competence as a whole that may not be gained by a focus on distinct behaviors.

Of course, there are inherent limitations to observational research. Such methods can be expensive and time-consuming (Achenbach et al., 1987). Observers may require hours of training and practice, and many hours must be devoted to observation of the target individual(s) and subsequent coding (Gardner, 2000). Costly recording equipment, such as video cameras, audio recorders, and computer software, may also be needed. Moreover, observations are limited regarding the type of behaviors included during the course of the observational period (Aspland & Gardner, 2003; Gardner, 2000). In other words, the observation is merely a "snapshot" of the individual(s) and cannot account for all behaviors and characteristics typically demonstrated by the individual(s). This may pose a particular problem in the study of covert and/or low base rate phenomena, such as depressed affect and antisocial behavior (Achenbach et al., 1987). Similarly, observations are dependent on the context in which the observation occurs; caution must be taken in generalizing findings to other situations. It is also possible that individuals will not

behave as they typically do because they are conscious of the observer's (or videocamera's) presence, although research has demonstrated that observer effects likely have little influence on the validity of findings (Aspland & Gardner, 2003; Gardner, 2000).

Despite the inherent advantages of observational research methods, there is a paucity of research employing such methods within the pediatric psychology literature (Holmbeck et al., 2002a; Drotar, 1997), especially related to social competence. Many of the previous studies employing observational methods assess children's reactions to pain and stressful medical procedures (Cohen et al., 2008) and family functioning and communication (Holmbeck et al., 2003; Holmbeck et al., 2002b; Janicke, Mitchell, & Stark, 2005). Although observations of familial interactions have become more common in recent years (Barakat, 2008; Kaugars et al., 2011), less attention has been devoted to observations of children and their peers. In one instance, Kapp-Simon and McGuire (1997) observed children with and without craniofacial defects socializing with groups of peers in their school lunch rooms. Another study compared friendships of childhood cancer survivors with those of typically developing children, although physical behaviors and body language were unavailable as interactions were audio-taped (Katz et al., 2011). While these are promising examples of studies using observational methods to measure social competence in pediatric populations, sample sizes were very small in both cases. This study adds to the scant literature on observational methods in pediatric populations by creating a tool to examine specific behaviors as well as global characteristics of real-life friendships between youth with SB and their friends. Reliability and validity of

second-order observational scales will be assessed as a response to a call for empirically-supported observational coding systems (Kaugars et al., 2011; Haynes, 2001). Use of such scales in future studies may clarify the nature of social relationships in youth with SB and provide an independent source of data. Further, the scales proposed in this study may be used in conjunction with the Family Interaction Macro-coding System (FIMS; Holmbeck, Belvedere, Gorey-Ferguson, & Schneider, 1995), a set of observational scales designed to assess family functioning in families of a child with SB.

Current Observational Measures of Social Functioning

There are currently few observational measures of youth's social competence. Many previous studies utilizing observational data collection methods have relied on frequencies of individual behavioral items in place of psychometrically-supported scales (Dirks et al., 2007). Thus, such analyses do not allow for conclusions related to valid constructs, because individual behaviors must be interpreted in a piecemeal fashion. Gottman's (1983) Rapid MACRO (R-MACRO) peer interaction coding system has been frequently used in past observational studies. It yields scales related to engagement (Kahen, Katz, & Gottman, 1994) and affect (Katz et al., 2011). The R-MACRO system was designed and normed on young children with an age range of approximately three-to-nine years old (Gottman, 1983). Furthermore, it was originally designed for use in conjunction with natural observation or audiotaped interactions instead of videotaped interactions. A peer-interaction coding system that takes into account both verbal and non-verbal behaviors and expressions and is applicable to older children and adolescents is necessary.

A derivative of the R-MACRO system, the Peer Problem-Solving Interaction Communication Affect Rating coding system (PPS-I CARE; Webster-Stratton et al., 1991) was created specifically for children with conduct problems. Its use has focused on two general constructs, negative conflict tactics and positive social skills, both of which have demonstrated discriminant validity (Webster-Stratton & Lindsay-Woolley, 1999). The exclusive use of this measure with children who have conduct problems likely indicates that it will have limited utility for study with youth with SB, a population that tends to have lower levels of conduct disorder than typically developing youth (Ammerman, Kane, Slomka, Reigel, Franzen, & Gadow, 1998).

The Autonomy and Relatedness Coding System (Allen, Hauser, Bell, McElhaney, & Tate, 1998) is a well-developed observational measure aimed at an evaluation of adolescents' development of autonomy. This measure has demonstrated construct validity and inter-rater reliability, producing a Displaying Autonomy Scale and a Displaying Relatedness Scale (Allen, Hauser, Bell, & O'Connor, 1994; Allen et al., 2002). Although it has been used in previous research of youth with SB (Holmbeck et al., 2003), it provides limited information about social competence due to its specific focus on autonomy in the context of family relationships. A coding system that comprehensively assesses multiple facets of social competence is needed to fully understand social interactions between children with SB and their friends.

Scale Constructs

It is clear that social competence has important developmental and clinical implications that necessitate adequate measurement; however, many studies are

characterized by incomplete, piecemeal methods aimed at capturing social competence (Dirks et al., 2007; Cavell, 1990). Research methods are often inconsistent with current theoretical standpoints, causing findings to be misleading and furthering the confusion around the construct in general (Dirks et al., 2007). For this study, constructs that have received considerable attention within the social competence literature were chosen to reflect a range of pertinent concepts that are observed in peer interactions and reveal information related to a child's social functioning, particularly within the SB population.

Individual Constructs

Three distinct constructs reflect characteristics of each individual child in the dyadic relationship. *Control* refers the child's ability to influence the friend's attention and achieve submission in order to gain desired resources or increased self-esteem (Adams, Bartlett, & Bukowski, 2010; Hawley, 1999). In other words, a child demonstrating control of a social interaction with his or her friend may attempt to dominate the activity by taking more of the talk time and directing decision-making processes so that the friend complies with decisions and opinions. This construct has been used in past studies assessing social competence in youth (Adams et al., 2010; Vaughn et al., 2003; Gifford-Smith & Brownell, 2003) and in observational studies of family functioning (Kaugars et al., 2011). In general, studies have demonstrated that children with moderate-to-high levels of social dominance tend to have better outcomes, including access to more resources (i.e., food, toys, attention, etc.) and higher social status among their peers (Hawley, 2003; Pope & Bierman, 1999; Vaughn et al., 2003). Meanwhile, more submissive youth are more likely to be less accepted by their peers and experience

lower self-efficacy in social situations (Hawley, Little, & Pasupathi, 2002). Observation of a child's control of a social interaction may be particularly relevant for youth with SB, as they tend to act more passively in social situations (Holmbeck et al., 2003).

Prosocial skills are also cited as key components of social competence models (Cavell, 1990; Dodge et al., 1986; Rose-Krasnor, 1997), but many studies continue to neglect assessment of such skills (Nassau & Drotar, 1997). These skills refer to specific behaviors and/or characteristics associated with various social outcomes, such as peer acceptance and sociometric status (Caldarella & Merrell, 1997). Examples of prosocial skills include decision-making skills (McFall, 1982), empathy (Caldarella & Merrell, 1997), self-control (Bierman, 2004), overt age-appropriate verbal behaviors (i.e., emotion expression, asking questions, etc.), and overt non-verbal behaviors (i.e., eye contact, gestures, etc.; Trower, 1980; Cavell, 1990). While studies frequently evaluate specific social skills in isolation, there may be some utility in combining multiple social skills into one variable, much like the scale proposed for the current study (Cavell, 1990). As would be expected, high levels of prosocial skills are related to high acceptance by peers and may even counteract displays of aggression (Bierman, 2004) or social anxiety (Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006). In youth with SB, prosocial skills continue to be under-studied (Devine, Gayes, Purnell, & Holmbeck, 2012; Ammerman, Van Hasselt, Hersen, & Moore, 1989; Van Hasselt, Ammerman, Hersen, Reigel, & Rowley, 1991).

Another component of social competence that provides valuable information about an individual child's social functioning is that of *positive affect*. This construct

refers to the expression of the child's affect that facilitates positive and appropriate social interactions with others (Halberstadt, Denham, & Dunsmore, 2001). Simply put, a child exhibiting positive affect displays emotions that beneficially contribute to the interaction with a close friend and is more able to interpret and respond to the friend's own emotions. The child may smile, laugh, and joke with more frequency than a child who engages in more negative expressions, such as frowning, crying, or displaying flat affect. Youth who clearly communicate their feelings and recognize their friends' emotions are more accepted by their peers (Nowicki & Duke, 1994) and report higher friendship quality (Denham, McKinley, Couchoud, & Holt, 1990). Furthermore, socially rejected youth exhibit more facial and verbal anger than children with average levels of peer acceptance (Hubbard, 2001). Because youth with SB tend do have difficulty interpreting others' emotions (Dennis, Landry, Barnes, & Fletcher, 2006) and are at risk for increased internalizing symptoms (Appleton et al., 1997; Essner & Holmbeck, 2010), their management and expression of their own feelings within social interactions with peers deserves further study. Children with SB did not display significantly different affect in interactions with their immediate family members compared with typically developing children (Holmbeck et al., 2003), but their expression of emotions may be qualitatively different in social settings with friends.

Dyadic Constructs

In addition to constructs applied to each individual within the social interaction, other constructs tap characteristics of the overall dyad. In fact, past assessments of social competence have been criticized for neglecting to acknowledge the influence of the other

person(s) in a given evaluation of social functioning (Rose-Krasnor, 1997). An individual's social competence may depend on the behavior of the other individuals involved in the interaction. Therefore, appraisals of the dyad provide valuable information about each unique pair that cannot be gathered from an assessment of individual characteristics (Hubbard, Dodge, Cillessen, Coie, & Schwartz, 2001). One such dyadic construct is *conflict*, or the extent to which the interaction is characterized by argument, disagreement, mutual annoyance, and mistrust (Parker & Asher, 1993; Bukowski et al., 1994). The pair may exhibit conflict physically (ex.: hitting, kicking, scowling, etc.), verbally (mocking, yelling, arguing, etc.), and may also have difficulty resolving disagreements that arise. Conflict has previously been investigated in observational studies of family functioning (Kaugars et al., 2011; Holmbeck et al., 2002b) and peer functioning (Gottman, 1983; Gifford-Smith & Brownell, 2003). It has been included in widely used self-report measures of friendship quality: namely, the Friendship Qualities Scale (Bukowski et al., 1994) and the Friendship Quality Questionnaire (Parker & Asher, 1993). Children who experience more conflict in their friendships and struggle to resolve their disagreements are typically less accepted by their peers (Parker & Asher, 1993) and have less positive interactions with friends (Gottman, 1983; Dodge, Price, Coie, & Christopoulos, 1990). Because conflict has been recognized as a key element of the quality of social interactions (Berndt, 2002), it is essential to further examine the construct within the close friendships of youth with SB. Although observational studies of family functioning have failed to find differences in conflict in families of youth with and without SB (Holmbeck et al., 2002b; Holmbeck et al., 2003),

observation of conflict in peer relationships for this population has not yet been studied.

Another construct of social competence that pertains to the social interaction is *dyadic cohesion*, or the degree of affection displayed by the peers that is characterized by caring, support, and interest (Parker & Asher, 1993; Bukowski et al., 1994). Again, this construct is dyadic because it depends on the behaviors of both individuals involved in the interaction (Rose-Krasnor, 1997). Dyads high in cohesion may be described as warm, encouraging, accepting, and well-connected with each other. Cohesion has long been a key component of family functioning and has been investigated in observational research (Holmbeck et al., 2002b; DeLambo, Ievers-Landis, Drotar, & Quittner, 2004; Kaugars et al., 2011), but it has less commonly been studied in youth's close friendships. Past research has explored the association between family cohesion and general social competence while neglecting to assess social cohesion within children's friendships as well (Bell, Avery, Jenkins, Feld, & Schoenrock, 1985; Banis et al., 1988). However, Gauze and colleagues (1996) found that familial cohesion and close friendships interact, with adaptive family environments providing support when children encounter stress in their friendships. Furthermore, previous researchers have examined constructs similar to cohesion using different terms, such as closeness (Bukowski et al., 1994; Devine et al., 2012) and validation and caring (Parker & Asher, 1993). Evaluation of cohesion is particularly important in preadolescence and adolescence as the peer group takes on greater importance in individuals' lives (Buhrmester, 1990). In general, youth with more cohesive friendships have more positive outcomes (Nangle et al., 2003; Mikami, 2010). Regarding the friendships of children with SB, assessments of dyadic cohesion rely on

self-report. In one study, children with SB reported lower levels of closeness in their relationships with best friends compared to their peers (Devine et al., 2012). The present study attempts to minimize the bias of self-report by using observational methods to assess the overall cohesion present within dyads of children with SB and their friends, a practice that is still relatively rare in the field.

The Current Study and Hypotheses

The current study presents a preliminary evaluation of the reliability and validity of second-order scales based on observational data that assess social competence in the peer interactions of children with SB and their close friends. Reliability was demonstrated by evaluating the inter-rater reliability and internal consistency of scale items. Construct validity as assessed by demonstrating agreement between expert coders regarding the placement of the items into each of the proposed observational scales. Correlations between each observational scale and questionnaires that measure convergent and divergent constructs were also computed as measures of construct and discriminant validity, respectively. Finally, a principal components analysis was conducted to provide further support for the composition of the proposed scales.

In general, it was anticipated that each of the proposed observational scales would be significantly correlated with questionnaires assessing similar constructs (see Table 2).

1. It as hypothesized that the control scale would be positively related to parent and teacher ratings of assertion and parent and child reports of dominance in suggesting social plans and choosing activities.

2. It was expected that the prosocial skills scale would be positively associated with parent reports of adaptive behaviors and ease of making friends, parent and teacher reports of self-control and cooperation, and child report of social self-efficacy and ease of making friends. This scale was expected to be inversely related to social problems reported by parents and teachers.
3. It was also hypothesized that the positive affect scale would be inversely related to parent and teacher report of aggressive behaviors and symptoms of anxiety and depression as well as child report of depressive symptoms.
4. The observational scale measuring conflict within the dyad was expected to be positively associated with parent report of conflict in family situations and child report of conflict with a best friend and teasing behavior.
5. Finally, it was hypothesized that dyadic cohesion would be positively related to parent, child, and teacher report of social acceptance, parent report of family cohesion, parent and child report of time spent with friends, and child ratings of companionship and closeness with a best friend.

Furthermore, it was expected that the five observational scales would not be significantly correlated with measures of constructs that do not assess social competence.

6. It was hypothesized that none of the four observational scales would be significantly related to spina bifida lesion level, intellectual function, mother-reported weight, or socioeconomic status.

CHAPTER 2

METHOD

Participants

Participants were recruited to participate in a longitudinal study investigating neurocognitive, family, and social functioning in children with SB. This study focused on the questionnaire data related to social functioning and friendship and observational data gathered from peer interactions at Time 1. Families of children with SB were recruited from four local hospitals and a statewide SB association in the Midwest. Inclusion criteria for children with SB ("target" children) were: (1) a diagnosis of SB, either myelomeningocele (MM), lipomeningocele, and myelocystocele; (2) age between eight and 15 at Time 1; (3) ability to speak and read English or Spanish; (4) involvement of at least one primary caregiver; and (5) residence within 300 miles of the research lab to allow for data collection at families' homes. Of the 246 families approached, 163 families agreed to participate in the study. Twenty-one of those families were unable to be contacted or later declined and two families did not meet inclusion criteria, resulting in a sample size of 140 families (57% participation rate). SB characteristics were not significantly different between families who participated and those who did not: type of SB (i.e., MM vs. other), $\chi^2(1) = .000$, $p > .05$, shunt status, $\chi^2(1) = .003$, $p > .05$, and occurrence of shunt infections, $\chi^2(1) = 1.08$, $p > .05$.

Each family was asked to invite a friend of the child with SB to participate. Inclusion criteria for the friends included (1) age between six and 17 at Time 1 (the target child's age range +/- two years) and (2) ability to speak and read English or Spanish. In addition to these criteria, families were strongly encouraged to invite friends who were not related to the target child and who were within two years of the target child's age, although friends violating these criteria were not excluded from the larger study. One hundred twenty-eight families (86%) were able to provide a peer within the specified age range (two peers were excluded because they were older than 17 years). Because the aim of this study was to learn more about the social competency of children with SB in interactions with their friends, any friends who were identified as family members were excluded in the analyses. One hundred six friends (88% of all friends recruited) were unrelated to the target child. In total, 106 children with SB (76% of the entire sample) and their friends were included in the analyses.

Youth with SB ranged in age from eight to 15 years (M = 11.19 years, SD = 2.40), and 55.7% were female. Of these children, 60.4% identified as Caucasian, 22.6% were Hispanic, 12.3% were African American, and 4.7% identified as an "other" race. Friends ranged in age from six to 17 years (M = 10.98 years, SD = 2.75), and were 55.7% female. Regarding racial background, 64.2% were Caucasian, 17.9% were Hispanic, 8.5% were African American, and 6.6% reported they belonged to an "other" racial background. SB characteristics of the target children, including type of SB, lesion level, shunt status, number of shunt revisions, and number of surgeries unrelated to shunts is reported in Table 1.

Table 1. Condition-specific characteristics of youth with SB

	Percent
Type of SB	
Myelomeningocele	84.0%
Lipomeningocele	9.4%
Myelocystocele	3.8%
Lesion Level	
Sacral	19.8%
Lumbar	62.3%
Thoracic	12.3%
Shunt Status (Present)	73.6%
	M (SD)
Number of Shunt Revisions	2.62 *(3.36)*
Number of Non-Shunt Surgeries	3.04 *(1.98)*

Procedures

Prior to data collection, the study was approved by both university and hospital Institutional Review Boards. At Time 1, data were collected via two three-hour home visits by trained research assistants. Informed consent and informed assent were obtained at the first home visit from caregivers and youth, respectively. Informed consent from the friend's guardian was obtained either in person or via mail prior to the second home visit when peer tasks were administered. Assent from the peer was obtained at the start of the second home visit.

During the first home visit, children with SB and their parent(s) or other caregivers completed a battery of questionnaires and engaged in video-taped family interaction tasks. Neuropsychological testing assessing intellectual functioning and executive functioning of the target child was also performed. At the second home visit, the target child and his or her friend each completed questionnaires and audio-taped interviews about general friendship characteristics, specific characteristics related to their friendship with each other, and problem-solving in social situations. The children with SB and their friends also engaged in structured interaction tasks that were video-taped. Data related to these interaction tasks were used to derive the observational scales proposed in this study. Families and participating friends received small gifts (i.e., T-shirts and pens) and monetary compensations ($150 for families and $50 for friends) in exchange for their time and effort.

More specifically, target children and their friends completed four interaction

tasks. All but one of the tasks was counter-balanced across dyads. One task asked the pair to work together to rank a variety of different toys based on how much they enjoyed playing them for approximately five minutes. In the unfamiliar object task, the children were presented with an ambiguous object and asked to develop a commercial advertising the object over a five-minute period. Another task asked the children to spend five minutes planning an adventure they could take together. They were prompted that they could discuss what they would do, where they would go, etc. Finally, the target child and the friend were required to identify an occasion in which they had each experienced a conflict with a peer. This task was always last. After each individual chose a conflict situation, the dyad had ten minutes to discuss both situations and brainstorm other problem-solving ideas that could have been used. Consistent with past research employing structured tasks, all tasks were selected on the basis that they elicited the contribution of opinions and ideas from both members of the dyad and allowed for displays of individuality and connectedness (Grotevant & Cooper, 1985). Because pre-determined, semi-structured tasks were utilized to gather a representative sample of peer interaction behaviors, the resulting observations may be considered analogues (Haynes, 2001).

Measures

Please see Appendices A, B, and C for copies of all observational, questionnaire, and interview measures.

Demographics

The Parent Demographic Questionnaire (PDQ) was developed for a larger study to determine a variety of demographic information about the child, caregiver(s), and family. Questions about the target child include the child's ethnicity/race, date of birth, school, grade, and spina bifida tasks that the child performs. Questions about the caregiver include the caregiver's relationship to the child, marital status, education, employment status, income, hours spent with the child, and spina bifida tasks that the caregiver performs for the child with spina bifida. Questions about the family include the number and relation of people living in the home and family medical history. Information from this measure was used to calculate each family's socioeconomic status according to the process outlined by Hollingshead (1975).

Observational Measures

The peer interaction tasks were coded using the Child-Peer Interaction Macro-Coding system (Holmbeck, Zebracki, Johnson, Belvedere, & Hommeyer, 2007). This coding system is an adaptation of several previous coding systems (Holmbeck, Belvedere, Gorey-Ferguson, & Schneider, 1995; Johnson & Holmbeck, 1999; Smetana, Yau, Restreppo, & Braeges, 1991) and also draws upon codes used in other systems (Allen et al., 1998; Allen, Porter, & McFarland, 2002; Buhrmester, Camparo, Christiansen, Gonsalez, & Hinshaw, 1992; Julien, Markman, Lindahl, Johnson, & Van Widenfelt, 1987; Levy, 1943; Paikoff, 1992). Each coder viewed an entire peer interaction task before rating the target child and the friend on codes broadly categorized

under interaction style, conflict, affect, control, collaborative problem solving, and characteristics of the dyad overall. For all codes, a five-point Likert scale with detailed, descriptive anchors was used by coders. For example, for the item assessing "Dominance," coders evaluate each child in the dyad for how much he or she has control over the interaction, considering how much time each child spends talking and directing the conversation (5 = Very Often, 4 = Frequently, 3 = Sometimes, 2 = Rarely, 1 = Not at All). Each coder spent approximately 20 to 30 minutes coding each dyad.

Both undergraduate and graduate research assistants were trained for about ten hours before coding the Time 1 videotapes. Training consisted of discussions of individual item codes, reviewing coding of peer interactions by an expert coder, and practicing coding on a standard set of taped interactions. Coders were required to achieve a 90% agreement rate on practice items before they were authorized to code study videotapes (i.e., "agreement" = concordance across coders within one point on the Likert scale). When questions arose, coders were able to consult with the coding system's developer.

For each of the four interaction tasks, behaviors and characteristics were rated by two coders, and item level means across coders for each task were averaged across the tasks to produce a single score for each target child and friend separately (for codes assessing individual constructs) or for each pair (for codes assessing dyadic constructs).

Convergent Validity Questionnaire Measures

The Adaptive Behavior Assessment System-Second Edition (ABAS-II; Harrison

& Oakland, 2003) is a parent-completed measure of their child's adaptive behavior. The measure includes subscales addressing communication, functional academics, home living, self-care, self-direction, and social functioning. The social functioning scale was the only scale used in this study. Parents are asked to evaluate the frequency of 23 social behaviors and features demonstrated by their children. Examples of items include, "apologizes if he/she hurts the feelings of others" and "laughs in response to funny comments or jokes." Items are rated on a four-point Likert scale: 0 *is not able,* 1 *never when needed,* 2 *sometimes when needed,* and 3 *always when needed*. In addition, respondents are asked to indicate whether or not they have guessed on an item. The measure has been found to be reliable, and the majority of skill areas have yielded internal consistency coefficients that are .90 or higher (Rust & Wallace, 2004). For this sample, coefficients were .89 and .90 for mother- and father-report, respectively.

The Child Behavior Checklist, parent form (CBCL; Achenbach & Rescorla, 2001), is comprised of 118 problem items (numbered 1-113). It is revised from the previous version of the CBCL for ages 4-18 (Achenbach, 1991a). It yields T-scores and percentiles for eight problem subscales, although only 4 scales (i.e., Anxious/Depressed, Withdrawn/Depressed, Social Problems, and Aggressive Behavior) were used in this study. Respondents rate each item on a three-point scale, from 0 *not true* to 1 *somewhat or sometimes true* to 2 *very true or often true*. T-scores above 70 are considered to fall within the clinical range and indicate significant deviation from the normative sample in the respective problem area; T-scores between 65 and 70 are considered to fall within the

borderline clinical range. The CBCL has been used in previous studies of children with spina bifida (Holmbeck, et al., 2003; Wallander et al., 1989). The teacher version, the Teacher Report Form (Achenbach & Rescorla, 2001), is comprised of 118 problem items (numbered 1-113) and is revised from the previous version of the TRF for ages 4-18 (Achenbach, 1991b). The TRF yields T-scores and percentiles for the same eight problem scales as the CBCL listed above. T-scores for the TRF also have clinical and borderline ranges identical to those in the CBCL. In this study, Cronbach's alphas ranged from .86 to .89 for the Internalizing Symptoms scale, .88 to .92 for the Externalizing Symptoms scale, and .71 to .75 for the Social Problems scale.

The Children's Depression Inventory (CDI; Kovacs, 1992) is a 27-item self-rated measure of depression for children. It is a well-validated measure of depression and has been used with spina bifida populations (Holmbeck et al., 2003; Friedman, Holmbeck, Jandasek, Zukerman, & Abad, 2004). Each item consists of three choices, keyed 0, 1, or 2, with higher scores indicating increased severity of depressive symptoms. Previous research has yielded alpha coefficients of .81 and .78 for spina bifida and comparison groups, respectively (Friedman et al., 2004). Standardized norms are available (Kovacs, 1992). In this sample, Cronbach's alpha was .78.

The Children's Self-Efficacy for Peer Interaction Scale (CSPI; Wheeler & Ladd, 1982) assesses children's perceived self-efficacy in social situations. The scale consists of 22 items describing peer interactions. Items are clustered into two groups: conflict and non-conflict. Each item describes a social situation (e.g. "Some kids want to play a

game"), and is followed by an incomplete statement requiring the subject to evaluate his or her ability to perform a verbal persuasive skill (e.g. "Asking them if you can play is _____ for you"). For each item, the subject chooses one of four choices: very hard, hard, easy, or very easy. The test-retest reliability of the CSPI is .90 for boys and .80 for girls (Wheeler & Ladd, 1982). Internal consistency for the total scale is high, with alpha = .85 for elementary school children. Cronbach's alpha = .82 for this sample. For this study, four items were dropped (numbers 15, 16, 18, and 20 from the original scale) because the wording (e.g., "Some kids are using your play area. Asking them to move is _____ for you.") was not age appropriate.

The Family Environment Scale (FES; Moos & Moos, 1994) measures social and environmental characteristics of the family and is completed by parents. The current study uses Form R, which measures people's perceptions of their actual family environments. The FES includes three main dimensions, comprising a total of ten subscales. The subscales are grouped according to domains, including the Relationship dimension (cohesion, expressiveness, and conflict subscales), Personal Growth dimension (independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, and moral-religious emphasis subscales), and the System Maintenance dimension (organization and control subscales). For the purpose of this study, only the cohesion and conflict subscales were analyzed. Examples of items on each subscale include "there is a feeling of togetherness in our family" and "we fight a lot in our family," respectively. Because internal consistency has been low in some studies

using the original true-false response format (Alderfer et al., 2008), this study used a four-point Likert-type scale to increase internal consistency and gather richer data about the family environment. Anchors ranged from 1 *strongly disagree* to 4 *strongly agree*. The FES-R has demonstrated moderate reliability (α=.61-.78; Moos & Moos, 1994). In the present study, internal consistency ranged from .63-.68 for the Cohesion scale and from .68-.77 for the Conflict scale.

The Friendship Activity Questionnaire (FAQ) is a 46-item instrument derived from the Friendship Qualities Scale (Bukowski et al., 1994). Although the Friendship Qualities Scale originally had separate forms for males and females, the FAQ can be administered to both genders because gender-specific terms in some items (e.g., "If my friend had to move away, I would miss him.") have been modified (e.g., "If my friend had to move away, I would miss him/her."). Additionally, the questionnaire's authors changed the wording of one item after publication (Bukowski et al., 1994) from "My friend thinks of things for us to do together" to "My friend and I do things together" to improve the psychometric properties of the subscales. The FAQ assesses the quality of the relationship between the respondent and his or her best friend across five domains: companionship (e.g. "My friend and I spend a lot of our free time together"), conflict (e.g. "I can get into fights with my friend"), help (e.g. "If other kids were bothering me, my friend would help me"), security (e.g. "If I have a problem at school or at home, I can talk to my friend about it"), and closeness (e.g. "I think about my friend even when my friend is not around"). For this study, only the closeness, companionship, and conflict

scales will be used. Respondents are asked to rate how true each statement in relation to his or her friendship on a five-point Likert scale, ranging from "not true" to "really true." Internal consistency statistics for all of the scales have been reported to be high, with alphas of .71 to .86 (Bukowski et al., 1994). In the present study, Cronbach's alpha coefficients were .63, .79, and .81 for the Companionship, Conflict, and Closeness scales, respectively.

The six-item Social Acceptance subscale from the Child version of Harter's Self-Perception Profile for Children (SPPC; Harter, 1985) assesses social acceptance by a child's peers. For each item, the reporter is presented with two statements that can describe a child (e.g. "Some kids find it *hard* to make friends BUT other kids find it's pretty *easy* to make friends"). The reporter identifies which statement best describes the child, and then decides if the statement is "really true" for that child or "sort of true" for that child. Previous research (Holmbeck, et al., 2003) has shown alpha coefficients to range from .67 to .93 in families of children with spina bifida. Child report on the SPPC in the present study resulted in low internal consistency (Cronbach's alpha = .52). Thus, it was dropped from subsequent convergent validity analyses. The parent and teacher versions consist of six subscales with three items each. The subscales include: Scholastic Competence, Social Acceptance, Athletic Competence, Physical Appearance, and Behavioral Conduct. The parent version has demonstrated adequate psychometric properties (Cole, Gondoli, & Peeke, 1998). Internal consistency coefficients were .69, .78, and .86 in this sample of teachers, mothers, and fathers, respectively. Parent and

teacher forms of the SPPC were used in this study.

The Social Skills Rating System (SSRS; Gresham & Elliot, 1990) is a standardized, norm-referenced questionnaire assessing various social skills that are considered important to the development of social competence. This study used versions adapted for parents and teachers. Both forms require the respondent to rate for each item how often the child demonstrates a specific skill and how important the skill is to the child's development. However, this study asked parents and teachers to only rate the frequency the specific skill for the child, from "0 = never" to "1 = sometimes" to "2 = very often." Although alternate forms are provided for different age ranges of the child, the elementary level form (suited for grades K-6) was used due to the age range of the participants at Time 1. Several of the available social subscales were used for this study, including the Assertion scale, Self-Control scale, and Cooperation scale. The SSRS has demonstrated adequate to good internal consistency. Coefficient alphas for the social skills subscales ranged from .86 to .95 for the teacher forms and .65 to .87 for the parent forms in previous studies (Gresham & Elliot, 1990). In the present investigation, alphas ranged from .76 to .88 for the Assertion scale, .80 to .85 for the Self-Control scale, and .81 to .90 for the Cooperation scale.

Convergent Validity Interview Measures

In addition to completing questionnaires, target children and their friends participated in three short audio-recorded interviews about friendships and peer relationships. Interviews were conducted privately with a research assistant. Questions

address social problem-solving, the child's general peer interactions, and the child's relationships with his/her participating friend.

The Friendship Interview, developed for the larger study, consists of 46 items for the target child and 43 items for the target child's friend. This questionnaire assesses the quality, quantity, and various characteristics of the respondent's general social relationships and friendships. For the purpose of this study, the following items were analyzed: "Not counting school, on how many days over the past week (the last 7 days) did you spend time with a friend or friends?" and "How often are you mean to other kids or tease them: all the time, some of the time, once in a while, or never?" Parents completed a questionnaire version of this measure.

The Friendship Questionnaire, also developed for the larger study, consists of 19 items for the target child at and 18 items for the target child's friend. This questionnaire assesses various characteristics of the specific friendship between the target child and the friend who is involved in the study. Of the items included, this study used the following: "How close are you to *name of friend*: 1-10," "Who usually comes up with the idea to spend time together: me, my friend, we take turns, other (e.g., parent)," and "Who usually chooses which activities you do together: me, my friend, we decide together, other (e.g., parent)."

Discriminant Validity Measures

The Vocabulary and Matrix Reasoning subtests of the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler, 1999) were used to determine an estimate of

children's full scale IQ (FSIQ). Both subtests were administered by trained research assistants at the time of the home visit. Vocabulary is a measure of the individual's expressive vocabulary, verbal knowledge, and fund of information and it is a good measure of crystallized intelligence and general intelligence (*g*). Wechsler (1999) reported the average reliability coefficient for children 6-16 years old to be .89. Matrix Reasoning is a measure of nonverbal fluid reasoning and general intellectual ability. The average reliability coefficient for children 6-16 years old was reported to be .92 (Wechsler, 1999). The FSIQ index has a normative mean of 100 with a standard deviation of 15.

Weight was assessed using mothers' written estimates of their child's weight on the Health Survey, a questionnaire based on national child and adolescent health guidelines (CDC, 1999). Although mothers' estimates of their children's weight are not as accurate as values measured by a scale, the precision of the weight estimates is not a key factor in the present study. Lesion level was obtained from children's medical charts. SES values were calculated using the Hollingshead (1975) guidelines. Mothers and fathers provided information on the Parent Demographic Form (described above) about their education and employment status.

Data Analytic Plan

Prior to the development of the observational scales, content validity was first established in accordance with previous recommendations (Haynes, Nelson, & Blaine, 1999; Holmbeck & Devine, 2009). Emphasis on content validity is particularly important

when devising behavioral observation measures (Haynes, 2001). Content validity thus drove the construction of the observational scales. First, constructs (i.e., control, positive affect, prosocial skills, dyadic conflict, dyadic cohesion) deemed relevant to youth with SB were chosen and comprehensively defined based on a review of the literature (see above). A panel of "experts" comprised of trained Macro coders from the research team were then provided with the scale definitions and an extensive list of items included in the Child-Peer Interaction Macro-Coding system (see Appendix D for all materials provided to expert coders). Expert coders were then asked to assign codes to individual and dyadic codes separately. Control was described as follows: "a child demonstrating high control will attempt to take over the interaction by taking more of the time to talk and dominating the decision-making process while influencing the other child to agree with his/her decisions and opinions." Prosocial skills were identified as follows: "the child exhibits overt behaviors or characteristics that function to create a positive social interaction with another person. The child may demonstrate confidence, good listening and conversational skills, and age-appropriate behaviors." The accompanying definition for positive affect was as follows: "the child shows emotion indicative of an upbeat, happy mood that facilitates positive, appropriate social interactions with a peer. The child may smile, laugh, and joke while showing an absence of anger, sadness, and frowning." Conflict was defined as follows: "the social interaction is characterized by argument, disagreement, mutual annoyance, and mistrust, and the pair finds it difficult to manage and resolve disagreements." Finally, dyadic cohesion referred to "the sense of affection

the child experiences with a friend and the strength of the child's bond with the friend that is characterized by caring, support, and interest. The pair generally appears warm, encouraging, accepting, and well-connected with each other." After reading the construct definitions, the experts were asked to classify each Macro code into only one of the available scale constructs. They were informed that they may indicate whether or not an item should be reverse-coded to best fit the chosen scale. Items that achieved 75% agreement across the panel were retained; all other items were dropped. Two rounds of item classification were necessary, as scale development is an iterative process that requires gradual refinement (Clark & Watson, 1995). Thus, the scales derived from this process were formed rationally based on the overall agreement of the experts, and content validity was infused within the development of the scales via this process.

After the initial development of the scales, inter-rater reliability at the scale level was determined for both the target children with SB and their peers. Intraclass correlations (ICCs) were conducted to yield reliability coefficients for each scale. Thus, ICCs provided a measure of the degree of agreement between coders for each of the proposed scales. For items assessing individual characteristics, only scores of the child with SB (or peer, for peer analyses) were used. In other words, individual items coded for the other individual in the interaction were not included in this analysis. Higher ICC coefficients indicate strong inter-rater reliability for the scale. The following criteria for ICC values were used: ≤.40 *good to fair*; .41-.60 *moderate*; .61-.80 *good*; .81-1.00 *excellent* agreement (Landis & Koch, 1977).

Internal consistency for each scale was ascertained by computing Cronbach's α reliability coefficients for both children with SB and their peers. Mean scores across all coders for each item were used in these calculations. Items that detracted from the psychometric properties of each scale were then discarded. For this study, coefficient alphas of .70 or higher indicated adequate internal consistency within each scale.

Correlations between all five subscales were also conducted to ascertain the validity of each of the subscales. Larger intersubscale correlation coefficients would indicate that some or all of the scales are measuring a unitary construct instead of distinctly separate constructs (Clark & Watson, 1995).

Convergent validity was established by conducting bivariate Pearson correlations between each observational scale and similar scales and/or items gathered via questionnaire or interview across informants (see Table 2). These analyses were restricted to children with SB, as peers did not have data collected from parents or teachers. Prior to these analyses, reports from children, mothers, fathers, and teachers on the same measures (such as the SSRS and the SPPC) were correlated. In accordance with the recommendation of Holmbeck and colleagues (2002a) regarding multi-informant data, a criterion of .40 was used to determine when reports from different informants may be averaged together. The correlations between the observational scales and the questionnaire and interview measures tested the five hypotheses stated previously. Overlapping common method variance was reduced because the validity indices have been gathered from data reported by multiple informants, all of whom provided data

Table 2. Proposed Observational Scales and Corresponding Questionnaire and Interview Measures

Macro Scale	Questionnaire (scale/item)	Reporter(s)
Control	Who suggests plans with friend (Interview/Q)	M, F, C
	Who chooses activity (Interview/Q)	M, F, C
	SSRS Assertion Scale	M, F, T
Conflict	FAQ Conflict	C
	Teasing Others (Interview)	C
	FES – Conflict Scale	M, F
Prosocial Skills	ABAS Social Functioning Scale	M, F
	CBCL/TRF Social Problems Scale (I)	M, F, T
	SSRS Self-Control Scale	M, F, T
	SSRS Cooperation Scale	M, F, T
	CSPI (Self-Efficacy)	C
Positive Affect	CBCL/TRF Aggressive Scale (I)	M, F, T
	CBCL/TRF Anxious/Depressed Scale (I)	M, F, T
	CBCL/TRF Withdrawn/Depressed Scale (I)	M, F, T
	CDI (I)	C
Dyadic Cohesion	FAQ Closeness	C
	FAQ Companionship	C
	Closeness 1-10 (Interview)	C
	Harter Social Acceptance	C, M, F, T
	Time Spent with Friends (Interview/Q)	C[a], M, F
	FES – Cohesion Scale	M, F

Note: I = expected inverse relationship; M = Mother; F = Father; C = Child (with SB); T = Teacher

[a] = measure was dropped due to low internal consistency

independent of the observational scales (Holmbeck & Devine, 2009). In theory, high correlations between the observational scales and their corresponding questionnaire and interview scales and items would support the hypothesis that the observational scales are indeed assessing their intended constructs. Due to the differing sample sizes of the various correlational analyses and the somewhat limited sample size of the overall study, the magnitude of the resulting correlation coefficients was considered a more appropriate indicator of effect than statistical significance. Therefore, the guidelines proposed by Cohen (1992) were used to assess the magnitude of the associations between the observational scores and their corresponding questionnaire and interview measures, such that r = .10 indicates a small effect, r = .30 indicates a medium effect, and r = .5 indicates a large effect.

Discriminant validity was assessed by Pearson correlations between the observational scales and four variables distinct from social competence: IQ, weight, lesion level, and SES. Again, common method variance was minimized due to the multiple informants and methods used to collect the discriminant variable data. The variables used to ascertain discriminant validity were chosen due to their lack of overlap with the Macro coding system. Coders did not rate the peer interactions based on codes similar to the discriminant variables. Low correlation coefficients would support the notion that the observational scales do not measure constructs unrelated to their intended construct (i.e., social competence; Kazdin, 2003). Again, Cohen's (1992) criteria for magnitude of effect were used to interpret the resulting correlation coefficients.

Finally, a principal-components analysis (PCA) with Varimax rotation was performed to provide further support for the structure of the proposed scales. Several criteria were used to determine appropriate factor structures for the observational items. Factors comprised of items loading above .40 and eigenvalues greater than or equal to 1 were considered for interpretation (Clark & Watson, 1995; Tabachnick & Fidell, 2007). Scree plots were consulted to determine the appropriate number of interpretable factors. The rotated loading matrix was also analyzed for simple structure; a component was considered interpretable if it contained at least three variables with loadings of .4 or higher and each of its variables correlated highly with the relevant component only (Tabachnick & Fidell, 2007). A similar factor structure to that proposed by the rationally derived method would provide additional psychometric evidence for the composition of the scales and the constructs they represent.

CHAPTER 3

RESULTS

The analyses outlined below are reported in the order in which they were conducted. First, the process of building content validity into the observational scale development is described. Second, interrater reliability and internal consistency are discussed, followed by a report on the correlations across all five observational scales. Next, convergent validity and discriminant validity analyses are discussed in the context of the hypotheses stated above. Finally, the principal components analyses are interpreted, and the resulting four components are described. Refinement of and modification to the proposed scales are addressed throughout this section.

Content Validity

Initially, items most salient to social competence were selected to comprise the item pool expert coders would use in the rational scale development exercise. Thirteen expert coders were then asked to classify Macro items by the three constructs assessing individual social competence: control, prosocial skills, and positive affect. A criterion of 75% agreement was used to determine whether or not an item would be retained or dropped. In total, 12 items were retained (2 = Control, 6 = Prosocial Skills, 4 = Positive Affect) and one was dropped ("Requests input from individual"). The same criterion was applied to twelve experts' classification of the dyadic constructs: conflict and dyadic

cohesion. Ten items were retained (5 = Conflict, 5 = Dyadic Cohesion) and one was dropped ("Positive Escalation"). The complete composition of scales as determined by the experts is available in Table 3.

Interrater Reliability

Prior to computing interrater reliability coefficients, items were collapsed across all four tasks (i.e., rank toys, make a commercial, plan an adventure, peer conflict) for each rater. Separate reliabilities were then calculated at the scale level for target and peer data using ICCs. Notably, three of the five items in both the Conflict and Dyadic Cohesion scales were coded at the dyadic level rather than the individual level. Because each scale contained two individual-level items, separate reliabilities were calculated for the children with SB and their peers. When comparing reliabilities between children with SB and their peers for the Conflict and Dyadic Cohesion scales, ICCs were artificially similar due to overlapping data (i.e., the same dyadic score used for the child with SB and the peer). Utilizing data from either target or peer data, four scales demonstrated excellent agreement: Control (SB target data: ICC = .84, 95% CI = .76 - .89; peer data: ICC = .83, 95% CI = .74 - .88), Prosocial Skills (SB target: ICC = .86, 95% CI = .80 - .91; peer: ICC = .86, 95% CI = .79 - .91), Positive Affect (SB target: ICC = .87, 95% CI = .80 - .91; peer: ICC = .84, 95% CI = .77 - .89), and Dyadic Cohesion (SB target: ICC = .87, 95% CI = .80 - .91; peer: ICC = .85, 95% CI = .78 - .90). Interrater reliability for the Conflict scale was good (SB target: ICC = .75, 95% CI = .63 - .83; peer: ICC = .77, 95% = .66 - .84).

Table 3. Final Composition of Scale Items Based on Rational Development of Scales

Scale	Items
Control Child with SB: (α = .69) Peer: (α = .73)	Dominance Pressures other to agree
Prosocial Skills Child with SB: (α = .84) Peer: (α = .86)	Confidence in stating opinions Eye contact Listens to others Maturity Promotes dialogue and collaboration Receptive to statements made by other
Positive Affect Child with SB: (α = .81) Peer: (α = .75)	Anger [R] Humor and laughter Intensity of negative affect [R] Frequency of negative affect [R] Intensity of positive affect Frequency of positive affect
Conflict Child with SB: (α = .86) Peer: (α = .89)	Able to reach an agreement/resolution [R] Attempted resolution of issues [R] Level of conflict within dyad Negative escalation Tolerates differences and disagreements [R]
Dyadic Cohesion Child with SB: (α = .92) Peer: (α = .91)	Mutuality Supportiveness Warmth General atmosphere: isolated, apathetic [R] General atmosphere: openness, comfortableness, warmth

[R] Items were reverse-coded

Internal Consistency

Cronbach's alpha coefficients were computed to serve as indicators of internal consistency for each of the five scales. Items were collapsed across all raters and all tasks to form means. Hence, each item included in its respective reliability analysis was an average of all four peer interaction tasks coded by two independent raters. Again, analyses were conducted for target and peer data separately, and similarities in coefficient values between children with SB and their peers must be interpreted with caution due to the overlapping dyadic data. Alpha coefficients were adequate for four of the five scales: Prosocial Skills (SB target: $\alpha = .84$; peer: $\alpha = .86$), Positive Affect (SB target: $\alpha = .81$; peer: $\alpha = .75$), Conflict (SB target: $\alpha = .86$; peer: $\alpha = .89$), and Dyadic Cohesion (SB target: $\alpha = .92$; peer: $\alpha = .91$). Peer data for the Control Scale yielded adequate internal consistency ($\alpha = .73$). However, the reliability coefficient using data from the child with SB ($\alpha = .69$) was less than adequate. The scale was retained because of its very close approximation to the stated criterion of .70. Previous measures of observational family functioning in pediatric populations have deemed similar reliability coefficients to be acceptable (Kaugars et al., 2010).

Interscale Correlations

Bivariate Pearson correlations among all five scales were computed to demonstrate the distinctness of each scale. With the exception of two correlations, absolute values of correlation coefficients ranged from .14 to .55 using data from target children with SB and from .18 to .61 using data from peers (see Table 4). Although the majority of these correlations were significant at the .01 level, significant correlations are

Table 4. Bivariate correlations between all five rationally derived observational scales

	Control	Prosocial Skills	Positive Affect	Conflict	Dyadic Cohesion
Control		.32**	.19*	.24*	.18
Prosocial Skills	.36**		.53**	-.61**	.84**
Positive Affect	.14	.54**		-.43**	.69**
Conflict	.22*	-.51**	-.49**		-.58**
Dyadic Cohesion	.25*	.86**	.73**	-.55**	

* indicates correlation is significant at $p < .05$;
** indicates correlation is significant at $p < .01$.
N = 104.
Correlation coefficients using target data are represented in the bottom left of correlation matrix, and correlation coefficients using peer data are represented in the upper right.

common among observational scales (Holmbeck, Johnson, et al., 2002; Kaugars et al., 2010). In fact, moderate correlations between scales suggests that all are related to a larger construct (i.e., social competence) while also being distinct enough to offer unique information. The Dyadic Cohesion scale correlated particularly strongly with the

Prosocial Skills and Positive Affect scales (target data: $r = .86$ and $r = .73$, respectively; peer data: .84 and .69, respectively), suggesting the Dyadic Cohesion scale may be measuring a construct that is somewhat indistinct from prosocial skills and positive affect. In sum, the correlations provide support for four scales measuring unique constructs.

To further explore the strong correlations between the Dyadic Cohesion, Prosocial Skills, and Positive Affect scales, bivariate Pearson correlations were calculated between all items from the corresponding scales using data from the target child with SB. Multiple high correlations of items from the Prosocial Skills and Positive Affect scales with the Dyadic Cohesion scale (i.e., $r \geq .70$) indicated that the latter scale may be more of a summary scale measuring aspects of social skills and affect. As a result of this measurement overlap, the Dyadic Cohesion scale was dropped from subsequent analyses.

Convergent Validity

To demonstrate that the four scales measure their intended constructs, each observational scale was correlated with scales and items from measures of similar constructs (see Table 2). Data reduction methods were utilized to minimize Type I error rates. Mother, father, and teacher versions of similar questionnaires correlated at or above .40 were averaged to form aggregate measures of the respective construct. All mother and

father reports on measures of continuous scales met the given criterion and were thus averaged to form composite parent reports. Teacher reports did not correlate significantly on comparable measures with either the individual mother and father reports or the combined parent reports, suggesting that they provide unique information related to children's social competence.

Several items expected to converge with the Control scale were measured on an ordinal scale, thereby requiring alternative data reduction methods. First, items were re-coded such that higher scores indicated more control. For example, in response to the item "Who usually chooses which activities you do together," both "my friend" and "other (ex. Parent)" were scored as 1, "we take turns" was scored as 2, and "me" was scored as 3. Chi-square analyses were conducted to assess the similarity between mother and father report on similar measures. A significant p-value suggests that mothers chose different categorical responses than fathers more often than what would be expected by chance. In other words, a significant Chi-square analysis shows that mothers and fathers provided significantly different responses to the ordinal items; thus, each parent contributed unique information about their child's social competence. As all analyses were significant at $p < .01$, mother and father report were not averaged.

It was hypothesized that the observational scales would be positively related to paper-and-pencil measures assessing similar components of social competence. All observational scales included in these analyses were comprised of coded data reflecting social competence in the target children with SB. Bivariate correlation coefficients (for continuous measures), one-way ANOVA *F* (for discrete measures), and *p* values are

presented in Table 5. Consistent with the first hypothesis, the Control scale was positively associated with both parent ($r = .24$, $p = .015$) and teacher report ($r = .23$, $p = .024$) on the SSRS Assertion scale, with these associations yielding small effects. Further, higher Control scale scores were found for mothers who reported their child chooses activities with friends ($M = 2.58$, $SD = .48$) compared to mothers who reported that someone else (i.e., a friend or parent) chooses activities ($M = 2.37$, $SD = .48$; $F(1, 88) = 4.32$, $p = .041$). Higher Control scores were related to mothers who reported their children initiate social activities with friends ($M = 2.56$, $SD = .51$) compared to mothers who indicated someone else (i.e., a friend or parent) initiates social activities ($M = 2.34$, $SD = .40$; $F(1, 90) = 4.34$, $p = .04$). Control scores did not differ by father or child report of activity decision-making or initiation of social activities.

As hypothesized, medium effects were found for the association between the Prosocial Skills scale and parent report on the SSRS Self-Control scale ($r = .30$, $p = .002$) as well as parent and teacher report on the SSRS Cooperation scale ($r = .23$, $p = .02$, parent report; $r = .36$, $p < .001$, teacher report). Further, small effects in the expected direction were found between the Prosocial Skills scale and the ABAS Social Skills scale ($r = .27$, $p = .006$), teacher-report on the SSRS Self-Control scale ($r = .29$, $p = .004$), child-report of ease of making friends ($r = .23$, $p = .020$) and the CBCL Social Problems scale ($r = -.22$, $p = .035$). Although predicted associations were not significant, small effects were also observed between the Prosocial Skills scale and the TRF Social Problems scale ($r = -.15$, $p > .05$) and the CSPI ($r = .14$, $p > .05$). No effects were found for parent-report of child's ease in making friends.

The third hypothesis was partially supported in that small effects in the expected direction were observed between the Positive Affect scale and TRF Internalizing Problems ($r = -.23$, $p = .032$) and TRF Externalizing Problems ($r = -.19$, $p > .05$). However, no effects were found for all other expected associations (i.e., CBCL Internalizing Problems, CBCL Externalizing Problems, CDI). Children with SB rated as displaying more positive affect tended to exhibit fewer teacher-reported internalizing and externalizing problems, but they were not associated with parent-reported internalizing and externalizing symptoms, or child-reported depressive symptoms.

Consistent with predictions, a medium effect was found between the Conflict Scale and the FAQ Conflict scale ($r = .31$, $p = .002$). No effects were found for correlations between the Conflict scale and the FES Conflict Scale or child report of teasing others.

Discriminant Validity

It was predicted that all four observational scales would have no relation to lesion level, FSIQ, mother-reported weight, and SES. To test this hypothesis, observational scales were correlated with the aforementioned variables (see Table 6). Contrary to expectations, the Control scale was positively associated with FSIQ ($r = .41$, $p < .001$; medium effect) and SES ($r = .12$, $p > .05$) and negatively associated with lesion level ($r = -.23$, $p = .02$; small effect). Children with SB who were rated higher on Control in their peer interactions were more likely to have greater intellectual functioning and SES and lower spinal cord lesions. Further, the Prosocial Skills scale was positively related to FSIQ ($r = .48$, $p < .001$; medium effect), mother-reported weight ($r = .23$, $p = .03$; small

effect), and SES (r = .27, p = .007; small effect), and negatively related to lesion level (r = -.20, p = .048; medium effect). Children observed to demonstrate more prosocial skills tended to have higher IQs, higher SES, greater mother-reported weights, and lower spinal cord lesions. In contrast to the hypotheses, the Positive Affect scale was positively associated with FSIQ scores (r = .21, p = .032; small effect) and SES (r = .14, p > .05; small effect), such that children with higher intellectual function or SES were more likely to demonstrate more positive affect. Finally, there were small but nonsignificant effects found between the Conflict scale and SES (r = -.17, p > 0.5) and mother-reported weight (r = -.19, p > .05), indicating observed conflict between the children with SB and their peers was slightly related to lower SES and mother-reported weight.

Factor Structure

After establishing the psychometric properties of the rationally derived scales, a PCA with Varimax rotation was conducted to further investigate the item composition of scales. All items that were reverse-coded for use in the rationally derived scales were re-coded, such that higher values represented greater quantity of the given behavior or characteristic. Using the criterion of eigenvalues greater than or equal to one, four possible factors emerged. Visual inspection of the scree plot (Cattell, 1966) supported either a two-factor or four-factor solution. In addition, examination of the rotated loading matrix suggested that a four-factor solution best met the goal of simple structure (Tabachnick & Fidell, 2007). However, the original PCA that extracted four factors included three items with moderate factor loadings exceeding .40 on at least two factors. The PCA was rerun after removing these three items. The final four-factor model

consisted of 16 items and explained 84.6% of the total variance.

Although the extracted factors were not composed of the exact combination of items specified in the rational scale derivation, each factor appears to measure constructs similar to those originally chosen based on a review of the literature (See Table 7). The first factor, labeled PCA-Conflict, contains seven items (α = .95): three from the proposed Conflict Scale, three from the proposed Positive Affect scale, and one from the proposed Control Scale. The second factor, labeled PCA-Positive Affect, is comprised of three items originally assigned to the Positive Affect scale (α = .95). The third factor, labeled PCA-Assertiveness, appears to measure dominance, verbal confidence, and encouragement of collaboration. This factor contains three items (α = .90): one from the proposed Control scale and two from the proposed Prosocial Skills scale. Finally, the fourth factor, labeled PCA-Listening Skills, contains three items (α = .83), all of which were originally classified in the proposed Prosocial Skills scale. This factor assesses a child's eye contact, receptivity to a friend's statements, and general demonstration of listening to his or her friend. Bivariate Pearson correlations of the four factors revealed significant associations between all of the factors (See Table 8). Absolute value of correlation coefficients ranged from .02 to .56. Correlations in this range suggest that all four components are related to a larger, unified construct (i.e., social competence), but that they also account for unique variability that justifies their use as subscales.

Table 5. Convergent validity: Bivariate Pearson correlations and F statistics comparing observational scales and questionnaire/interview measures

Observational Scale	Questionnaire/ Interview Item	Reporter	N	r
Prosocial Skills	ABAS – Social Skills Scale	Parent	101	.27**
	SSRS – Self-Control Scale	Parent	102	.30**
		Teacher	94	.29**
	SSRS – Cooperation Scale	Parent	102	.23*
		Teacher	94	.36**
	CBCL – Social Problems Scale	Parent	96	-.22*
	TRF – Social Problems Scale	Teacher	91	-.15
	Making Friends	Parent	102	.03
	Making Friends (Friendship Interview)	Child	102	.23*
	CSPI (Social Self-Efficacy)	Child	100	.14
Positive Affect	CBCL – Internalizing Problems	Parent	96	-.01
	TRF – Internalizing Problems	Teacher	91	-.23*
	CBCL – Externalizing Problems	Parent	96	-.03
	TRF – Externalizing Problems\	Teacher	91	-.19
	CDI	Child	101	-.08
Conflict	FES – Conflict Scale	Parent	102	-.05
	FAQ – Conflict Scale	Child	100	.31**
	Teasing Others (Friendship Interview)	Child	101	.04
Control	SSRS – Assertion Scale	Parent	102	.24*
		Teacher	94	.23*
			N	F
	Initiation of social plans	Mother	91	4.34*
		Father	77	3.30
		Child	101	1.83
	Choosing social activities	Mother	89	4.32*
		Father	77	.02
		Child	100	.15

Note: * indicates correlation is significant at $p < .05$; ** indicates correlation is significant at $p < .01$.

Table 6. Discriminant validity: Bivariate Pearson correlations between observational scales and variables not measured by the Macro coding system

	Lesion Level (N = 101)	FSIQ (N = 103)	Weight (N = 89)	SES (N = 102)
Control	-.23*	.41**	-.09	.12
Prosocial Skills	-.20*	.48**	.23*	.27**
Positive Affect	.06	.21*	.09	.14
Conflict	.01	-.04	-.19	-.17

Note: * indicates correlation is significant at $p < .05$; ** indicates correlation is significant at $p < .01$.

Table 7. Components extracted from principal component analysis with Varimax rotation

Observational Item	Component 1 PCA-Conflict	Component 2 PCA-Pos. Affect	Component 3 PCA-Assert.	Component 4 PCA-Listening
Intensity of negative affect	**.90**			
Level of conflict within dyad	**.90**			
Negative escalation	**.89**			
Anger	**.89**			
Tolerates differences and disagreements	**-.89**			
Frequency of negative affect	**.88**			
Pressures other to agree	**.72**		.46	
Humor and laughter		**.91**		
Frequency of positive affect		**.90**		
Intensity of positive affect		**.88**	.35	
Dominance			**.91**	
Promotes dialogue and collaboration			**.82**	.40
Confidence stating opinions		.38	**.82**	
Listens to others	-.34			**.85**
Eye contact				**.76**
Receptive to statements made by other	-.42			**.75**
Other statistics				
Eigenvalues	6.20	4.93	1.29	1.12
Percent variance explained	38.76	30.80	8.08	6.98
Cronbach's alpha	.95	.95	.90	.83

Table 8. Bivariate correlations between components extracted from PCA with Varimax rotation

	Component 1 PCA-Conflict	Component 2 PCA-Pos. Affect	Component 3 PCA-Assert.	Component 4 PCA-Listening Skills
Component 1 PCA-Conflict	1.00	-.02	.22*	-.39**
Component 2 PCA-Pos. Affect		1.00	.56**	.45**
Component 3 PCA-Assert.			1.00	.33**
Component 4 PCA-Listening Skills				1.00

* indicates correlation is significant at $p < .05$; ** indicates correlation is significant at $p < .01$.
N = 10

CHAPTER 4

DISCUSSION

To address the need for observational measures of social competence in pediatric populations (Noll & Bukowski, 2012), this study describes the rational construction of social competence scales derived from observational peer interaction data in a sample of youth with SB and their peers. Psychometric characteristics (i.e., internal consistency, inter-rater reliability, content validity, convergent validity, and discriminant validity) of the scales are also reported. Observational scales were examined separately using data from both children with SB and peers when possible. Finally, a PCA was conducted to determine the best statistical solution for observational scales. In general, four of the five proposed observational scales exhibited adequate psychometric properties: Control, Prosocial Skills, Positive Affect, and Conflict. The fifth scale, Dyadic Cohesion, appeared to reflect aspects of several of the other scales, so it was dropped from subsequent analyses. Despite the preliminary support for the development of the four social competence scales, the PCA results suggested a somewhat different combination of items; however, the scales formed by the statistical procedures of the PCA reflect constructs similar to those originally proposed during the rational development phase of the study.

The rationally derived scales, based on agreement from a panel of expert coders, demonstrated adequate reliability characteristics. Good-to-excellent interrater reliability

characteristics. Good-to-excellent inter-rater reliability statistics (i.e., intraclass correlation coefficients) at the scale-level using data from either the children with SB or the peers suggested that the observed social interactions can be accurately described by coders using a macro coding system. For each scale, all raters came to a consensus as to the relative level of the construct exhibited by the child with SB or the peer. In addition, adequate-to-excellent internal consistency indexes (i.e., Cronbach's alpha coefficients) implied that each scale contains items that measure the same construct. This provided support for the construct validity of the expert coders' classifications during initial scale development.

Investigation of the correlations between all five rational scales revealed concerns about the proposed Dyadic Cohesion scale due to the high correlations (i.e., coefficients approximately .70 and greater) with both the Prosocial Skills and Positive Affect scales. Correlations between the items on the three scales demonstrated high correlations for several of the items from the Dyadic Cohesion scale, eliminating the possibility that deleting one or two poor items from the scale would improve the quality of the subscale. Overall, these results suggest that the Dyadic Cohesion scale is more of a comprehensive measure of both prosocial skills and positive affect; it does not appear to capture unique variability in the observed social interaction. Because the scale did not appear to measure a distinct construct, but rather a combination of two, it was removed from further consideration. The correlations among the remaining four subscales were low-to-moderate. These correlations indicated that each scale measured a distinct construct (i.e., conflict, control, prosocial skills, positive affect) while also relating to a more global

concept (i.e., social competence). These correlations provide further support for the utility of four subscales in the assessment of observational social competence.

Hypotheses predicting convergent validity between the observational scales and interview and questionnaire methods were partially supported. First, the Control scale was associated with both parent and teacher report of assertiveness on the SSRS, a well-validated, psychometrically sound questionnaire measure (Matson & Wilkins, 2009). In addition, mothers who reported that their children with SB initiate social plans and take an active role in choosing activities with friends had children rated higher on the Control scale. A lack of significant associations between the observational scale and child and father report of initiating plans and choosing activities may be due to different perceptions or experiences compared to mothers (Achenbach et al., 1987; Epstein, Renk, Duhig, Bosco, & Phares, 2004). Alternatively, considering the strength of parents' ability to report on observable behaviors in their children (La Greca & Lemanek, 1996), mothers' responses may simply be most similar to the observations of independent coders on these items. Taken together, it appears that social control can be adequately observed in youth with SB and rated by independent observers. These ratings are supported by both parent and teacher reports on indicators of social control.

Of the ten associations between the Prosocial Skills scale and parent, teacher, and child measures of social skills, two demonstrated medium effects and seven demonstrated small effects in the expected direction (seven of the ten associations were statistically significant). Specifically, the observational scale was positively related to parent-reported adaptive social behaviors, parent- and teacher-reported social self-control and

cooperation, and child-reported ease of making friends and social self-efficacy. Accordingly, the proposed observational scale is supported by converging evidence from questionnaire and interview items assessing both specific skills and more global skill indexes. Prosocial Skills scores were also inversely related to parent and teacher reports of social problems. As expected, children with SB who possess strong prosocial skills would often be expected to have fewer problems in their social interactions (Cavell, 1990). These results corroborate the accuracy of the raters in their observations of social skills exhibited by youth with SB in their peer interactions. The correlation between the Prosocial Skills scale and parent report of ease of making friends may not have demonstrated a small or medium effect due to the unique perceptions and differential knowledge of mothers and fathers in relation to the third-party rater who observed the peer interaction (Epstein et al., 2004).

Of the five hypothesized correlations between the Positive Affect scale and questionnaire measures, teacher report of internalizing symptoms and externalizing symptoms yielded small effects. Teachers' perceptions of a child's anxious and depressive symptoms likely rely on their observation of the child's outward affect instead of the child's actual internalized thoughts and emotions (Achenbach et al., 1987). Similarly, characteristics of externalizing disorders (e.g., ADHD, conduct disorder, oppositional defiant disorder, etc.) may be simpler to judge and are readily observable by teachers. In support of these findings, a meta-analysis by Achenbach and colleagues (1987) revealed that teachers and trained observers tend to provide similar reports of children's emotional and behavioral function. Therefore, the Positive Affect scale appears

to reflect directly observable facial expressions and body language associated with symptoms of anxiety, depression, ADHD, and behavioral disorders instead of the more nuanced behaviors and perceptions of which the child and his or her parents are likely more aware. In fact, children may behave differently in the classroom than at home or in other settings (Fagan & Fantuzzo, 1999); their semi-structured interactions in this study may elicit behavior and affect similar to that demonstrated at school. Alternatively, it is possible that the peer interactions did not adequately allow for the opportunity to observe a range of affect displayed by the children. Children tend to display particularly high levels of positive affect when spending time with friends compared to individuals not identified as friends (Newcomb & Bagwell, 1995). The friendship context likely evokes more smiling and laughing compared to other contexts, such as in the family or classroom. In other words, children's affect, when observed in interactions with friends, may be higher than that observed by family and teachers across a range of situations. In support of this explanation, mean levels of positive affect for both children with SB and their peers were relatively high and standard deviations were low.

Of the three correlations proposed for the validation of the Conflict scale, one (i.e., child report of conflict with a best friend) produced a medium effect. Given the tendency for children to have unique perspectives on their own social competence (Colegrove & Huntzinger, 1994), it is notable that the observational scale appears to capture conflict as perceived by the youth themselves. Relational aggression is particularly prevalent in adolescence and is less likely to be detected by parents, teaches, or other adults (Prinstein, Boergers, & Vernberg, 2001); thus, the perspective of the child

or adolescent may be more valid when reporting on conflict in social interactions. The lack of small or medium magnitude of the correlation between observed conflict and parent-reported family conflict may be explained by the differing behavior demonstrated by youth across contexts (Achenbach et al., 1987; Fagan & Fantuzzo, 1999) and the diverse perceptions of informants (Epstein et al., 2004). Children who argue and fight with family members do not necessarily experience similar levels of conflict when interacting with a friend. Alternatively, similar levels of conflict may occur in both peer and family contexts, with parents being less aware of the conflicts occurring in their children's friendships.

Discriminant validity hypotheses were minimally supported by the current study as well. Only five of the 16 correlations between observational scales and the selected non-social competence measures did not show small, medium, or large effects (eight of the 16 correlations were not statistically significant). Notably, medium effects were observed for correlations between IQ and the Control and Positive Affect scales, and a small effect was observed between IQ and the Prosocial Skills scales. Because the observational Macro coding system does not provide a reliable assessment of intellectual or cognitive function, it is more likely that the three significant associations between IQ and the observational scales reflect the direct relationship cognitive ability and social competence in youth with SB (Rose & Holmbeck, 2007). This explanation may also underlie the small effect correlations between lesion level and the Control and Prosocial Skills scales because lesion level is inversely related to intellectual functioning (i.e., lower lesion levels are associated with higher intellectual ability; Fletcher et al., 2005).

Other studies have also found greater social difficulties in youth with spina bifida who have higher lesion levels (Devine et al., 2012). Furthermore, the correlations with small effects between SES and the four social competence scales are not likely due to a shared construct measured by both variables. None of the items comprising these scales include information about family income or parental education and employment. Rather, this finding may reflect the finding that youth with SB from lower SES backgrounds have greater social problems than their higher SES peers (Holmbeck et al., 2003). Despite these associations, the observational scales and the divergent measures did not share high levels of overlapping variance. The scales appear to measure distinct constructs, with significant correlations possibly explained by naturally occurring characteristics of socially competent youth with spina bifida.

Initially, the exploratory PCA was intended to validate the structure and composition of the observational scales. In support of this notion, examination of the analysis provided support for four factors. The extracted components appear to reflect constructs similar to the proposed scales based on analysis of items, reinforcing the construct validity of the rational scales. However, the loading of items onto the components differed from the rationally derived scales. Both the rational and PCA methods of scale development produced Conflict and Positive Affect scales with similar item composition across both methods. The rational Control scale was similar to the Assertiveness scale produced by the PCA. The Listening Skills scale extracted from the PCA appears to assess a more specific aspect of social competence compared to the broad Prosocial Skills scale proposed by the rational method. In this sample, a child's ability to

listen to his or her friend during an interaction may be particularly relevant. Overall, the PCA was unable to confirm the exact structure of the proposed scales, but it did provide some support for the four constructs chosen to assess social competence.

Given that different scales were produced by the rational and PCA methods, the question arises as to which set of scales should be used in future research. Four of the proposed rationally-derived scales possess adequate inter-rater reliability, internal consistency, and construct validity. Convergent and discriminant validity are also encouraging. These psychometric properties reinforce the potential utility of the rationally-derived scales. However, there is a valid argument for the superiority of the PCA scales. Factor analytic methods provide the best possible statistical solution (Floyd & Widaman, 1995), resulting in stronger psychometric properties than rationally-derived scales. Further, scales produced by factor-analytic methods reduce the subjectivity of the scales by relying on rigorous statistical principles instead of the scale developers' judgments (Worthington & Whittaker, 2006). Although a potential caveat of PCA is the possibility that psychometrically sound scales with little interpretive value will be extracted (Clark & Watson, 1995), the PCA scales presented here capture constructs similar to those identified in the social competence literature. Accordingly, the PCA scales represent constructs supported by theory and possess psychometric properties that maximize the reliability and internal consistency. Despite these advantages, further investigation is necessary to determine the psychometrics of the PCA scales. Additional statistics to pursue include interrater reliability analyses at the scale level, convergent validity, and discriminant validity.

Study Strengths

The present study has several strengths. First, there is a clear need for the proposed observational scales. The scales presented here are unique in that they focus on social competence demonstrated in interactions with close friends. Given the importance of friendships during childhood and adolescence, the focus on interactions with friends rather than peers and acquaintances adds to the utility of the scales in answering questions about the friendships of youth with SB. As evident by the social deficits reported by parents, teachers, and children with SB, further tools are required to refine measurement efforts. In fact, the observers act as additional informants as well, adding another layer of information in multi-method, multi-informant research. More precise measurement methods allow for research conclusions with increased validity. Second, in accordance with recommendations by Holmbeck and Devine (2009), content validity was "built in" to the scales at the start of the development process. Third, interrater reliability, internal consistency, convergent validity, and discriminant validity were methodically assessed. Information garnered from these analyses resulted in a revision to the original scale proposal (i.e., the Dyadic Cohesion scale was removed from subsequent analyses). Fourth, exploratory factor-analytic procedures were conducted to provide additional support for the four final scale constructs and item structures.

Limitations

Despite the strengths of the study listed above, findings should be interpreted in the context of several limitations. The inherent inclusion of bias in the rational method of scale development must be acknowledged. Although a large number of "experts" were

recruited in an effort to minimize subjectivity, classification of items was based on human judgment. It is also crucial to consider the context in which the peer interactions took place. The interactions occurred at home between the child with SB and his or her friend and included a standard set of activities. Therefore, the resulting scales are reliable and valid only for similar peer interactions. Generalizability to other contexts and populations cannot be inferred. For instance, interactions occurring with non-friends, groups of children, and/or at other environments may not be adequately measured by the proposed scales. However, the natural setting (i.e., the home) in which the peer interactions took place likely produces more valid information compared to clinical or lab settings (Gardner, 2000). In addition, the scales were not validated for use with specific subgroups of youth with SB, such as children from certain ethnic groups or very young children. It is also possible that differences in social competence occurred across observational tasks, as this was not investigated in the present study. Youth with SB may have performed better on some tasks relative to others. Furthermore, the reliability analyses using data from the peers are not entirely independent for the Conflict and Dyadic Cohesion scales. Six items in the coding system (i.e., Mutuality, Level of conflict within the dyad, Negative escalation, Able to reach an agreement/resolution, General atmosphere of openness, and General atmosphere of isolation) were rated for the overall dyad rather than the child with SB and the peer separately. Reliability results are thus artificially similar for targets and peers due to the lack of independent data. Finally, the limited sample size precluded the use of confirmatory factor analysis and limits the conclusions based on the exploratory PCA. A confirmatory factor analysis would have

refined the structure of the rational scales by allowing for problematic items to be identified and dropped (Holmbeck & Devine, 2009).

Research Implications

The observational scales presented here may be useful in future studies of social competence in youth with SB. They can be added to multi-informant, multimethod research protocols to better capture the strengths and deficits in the social domain for these youth. Knowledge of the friendships of children with SB can also be expanded and refined. However, future research is necessary to further examine the utility of the scales. Predictive validity would provide additional support for the use of the scales in research. For example, the observational scales could be used to predict social difficulties several years later. Moreover, psychometric properties of the scales could be analyzed for different samples of youth with SB or for other chronic illness populations. Pediatric inflammatory bowel disease, sickle cell anemia, or diabetes may be additional conditions to investigate given the findings of social deficits in children with these illnesses (Mackner & Crandall, 2006; Noll et al., 1996; Helgeson et al., 2006). Reliability and validity of the rationally-derived scales may be investigated in different populations or exploratory factor-analytic strategies may be used to determine more appropriate groupings of items. Lastly, additional investigations of the scales derived by the PCA in this study should be pursued. The scales extracted from the PCA fit with the existing literature and demonstrated strong internal consistency. Evidence from bivariate correlations between scales suggests that these scales measure distinct second-order socially-oriented constructs. As the benefits of factor-analytic scale development

strategies are clear (Floyd & Widaman, 1995; Worthington & Whittaker, 2006), further study should establish inter-rater reliability at the scale level, convergent validity, and discriminant validity for the PCA scales. In addition, larger samples would facilitate the application of structural equation modeling that would further support the scale structures.

Clinical Implications

The observational scales also yield potential clinical benefits. First, more accurate measurement improves the ecological validity of the overall research. Research conclusions and insights are then more meaningful and may lead to successful interventions. For instance, use of the observational scales may reveal aspects of social competence that are particular strengths or weaknesses of youth with SB, which can then be targeted in subsequent interventions aimed at improving social functioning and friendships. Second, the proposed scales may be instrumental in developing a screening measure for clinicians to use to address social referral questions. A brief observational screening tool would add an additional source and method to the wealth of information gathered by clinicians during the assessment process and may provide unique diagnostic information not captured by questionnaire and interview measures (Meyer et al., 2001; Haynes, 2001).

Summary

In conclusion, subdomains of social competence (i.e., conflict, control, prosocial skills, and positive affect) can be reliably and validly assessed based on observations of peer interactions between youth with SB and their peers. Observational scales provide an

additional strategy in the conduct of multi-informant, multimethod research. Additional research is needed to investigate the psychometrics of the scales derived from the PCA. More sophisticated methods for the investigation of social competence will increase the validity and generalizability of conclusions made from such rigorous research.

APPENDIX A

OBSERVATIONAL MEASURE

CHILD-PEER INTERACTION MACRO-CODING MANUAL*
(Revised 8/30/07)

Grayson N. Holmbeck
Kathy Zebracki
Sharon Z. Johnson
Mariana Belvedere
Jennifer S. Hommeyer

Loyola University of Chicago
Department of Psychology
6525 N. Sheridan Road
Chicago, IL 60626
312-508-2967

* This coding system is an adaptation of a system developed by Holmbeck, Belvedere, Gorey-Ferguson, & Schneider (1995), Johnson & Holmbeck (1999), and Smetana, Yau, Restrepo, & Braeges (1991). Codes are also based on systems developed by Allen, Hauser, Bell, Boykin, & Tate (1994), Allen, Porter, & McFarland (2002), Buhrmester, Camparo, Christiansen, Gonsalez, & Hinshaw (1992), Julien, Markman, Lindahl, Johnson & Van Widenfelt (1987), Levy (1943), and Paikoff (1992).

** When coding the behavior of the child and peer, base your judgments on behavior that you would expect to be typical of a healthy child at a similar age.**

I. INTERACTION STYLE

A. Involvement in the task (1-2). Active and enthusiastic participation in the interaction. Involvement in the task and level of enthusiasm is not just a matter of verbal ability, but includes whether or not the responses are on target and show that the child or peer is tracking the interaction verbally and nonverbally. VERBAL: Individual discusses issues proposed, demonstrates enthusiasm, initiates discussion, gives ideas, and expresses thoughts. NONVERBAL: Facial expressions indicate high level of enthusiasm; individual is engaged during the interaction. An individual who is passive and minimally interacts with the other or the task and/or who frequently engages in off task behavior would receive a low sore on this code. In addition, an individual who frequently engages in off task behavior would receive a low score.

5. Very often = S follows conversation, participates in issues, looks attentive and enthusiastic.

4. Frequently = S follows conversation, participates verbally and makes comments on most issues, but is not as enthusiastic as a "5." Or, S participates in issues and follows the conversation, but is emotionally upset and thus not as enthusiastic as a "5."

3. Sometimes = S follows conversation, but participates only in some issues. S is distracted at certain points during the interaction and does not contribute with discussion. Somewhat unenthusiastic.

2. Rarely = S changes focus of conversation, or does not follow it, or chooses not to interact much, or looks tired and rather bored during interaction. Lacks enthusiasm.

1. Not at All = S looks tired and very bored, chooses not to interact, or changes focus of conversation several times. Very unenthusiastic.

B. Clarity of thought/idea expression (3-4). This item refers to how clearly and articulately S communicates thoughts and ideas to other individual in the dyad. S may explain thoughts and ideas expressed if needed. Ideas are easy to understand. Do not judge on the frequency or amount of talking the individual does.

5. Very clear = S is specific and clear about ideas expressed. Ideas are expressed directly. Ideas are easy to understand.

4. Fairly clear = S is occasionally vague about he/she wants to say, but messages are still clear.

3. Somewhat clear = S has a somewhat difficult time expressing thoughts and ideas, S does not give complete sentences, or S uses words that lead to ambiguous interpretation; however you still have an understanding of his/her expressed thoughts.

2. Fairly vague = S is general, doesn't define messages, uses vague words which compromise understanding, uses incomplete sentences, or it is difficult to understand his/her ideas.

1. Very vague = S uses incomplete sentences, S is ambiguous and general, there is no clear message at all, and you cannot understand his/her ideas.

C. Confidence in stating opinions (5-6). The extent to which an individual demonstrates confidence in speaking. An individual scoring high on this code is self-reliant and confident when responding to the task demands. S/he responds freely and independently, without relying on verification or approval from another individual. In contrast, an individual scoring low on this code is dependent on the other individual for encouragement or support before responding. An individual who lacks confidence will speak only when spoken to and will make qualifying statements that reflect insecurity. Confidence can be demonstrated verbally and nonverbally. Examples of confident verbal behaviors include: being verbally active, keeping appropriate volume of voice, not speaking loudly or so low that it is difficult to hear; an individual who makes clear statements that she/he feels uncomfortable discussing an issue would receive a low score on this code. Examples of unconfident nonverbal behaviors include: keeping head down, giggling nervously, hitting table, or avoiding eye contact. Note that a loud, shrill statement that is repeated frequently is not necessarily a confident statement. Also, be careful to not score down for niceness or sensitivity to the feeling of the other person. A confident person can be nice and still be confident. Furthermore, a confident person does not have to be a dominant person. Confidence refers to level of self-assurance whereas dominance refers to exerting influence or control **Note:** If the person does not speak, code a "1."

5. Very often = S is consistently confident when he/she speaks. The individual always voices his/her own opinions and views during the interaction, and speaks forcefully and with conviction. Never makes qualifying statements. Statements have no sings of hesitation or uncertainty in voicing opinions.

4. Frequently = S speaks with confidence on most occasions. May make a qualifying statement. Somewhat less forceful or may be tentative when speaking. Sometimes unwilling to elaborate at length about opinions. On a few occasions does not express individual views as demonstrated by either by looking to the other individual for approval or support before responding or by allowing the other individual to respond for him/her.

3. Sometimes = S will state reasons forcefully only about half the time. Sounds tentative or unsure the rest of the time. May back down after initially stating thoughts confidently. There are several instances in which the person is unwilling to express individual opinions.

2. Rarely = S may make one confident statement, but for the most part sounds very unsure about own ideas and reasons. Tentative. Person is reluctant to speak he/his own views/opinions, and rarely expresses own opinions.

1. Not at All = S shows no confidence in own opinions. Does not offer own reasons and ideas in discussion. May speak a bit when spoken to, but answers are tentative and undeveloped. Withdrawn.

D. Provides explanations for positions (7-8). Reasoning involves providing explanations or justifications for one's positions. DO NOT JUDGE THE QUALITY OR EFFECTIVENESS OF REASONS GIVEN BY CHILD OR PEER. Your score should be based on the proportion of S answers that involve reasoning. Note: if explanations are not applicable, score "3"

5. Very often = When S speaks, he/she very often provides reasons that support his/her ideas.

4. Frequently = When S speaks, he/she frequently provides reasons that support own ideas, but at certain points in the interaction, he/she limits own participation to absolute statements.

3. Sometimes = S provides explanations for only some issues discussed.

2. Rarely = S gives short answers and infrequently provides explanations.

1. Not at All = S does not provide explanations for thoughts or ideas.

E. Requests input from the other individual (9-10). S makes verbal and nonverbal gestures to include the other individual in the interaction, shows clear interest in knowing the other's thoughts and opinions, interested in including the other in the

interaction. VERBAL: addressing the other by name, requesting direct opinion (i.e., asking questions) about issue discussed (e.g., "Which game piece do you want to be?"). NONVERBAL: hand movements or gestures which request input from the other.

5. Very Often = S almost always requests input from the other individual. S shows interest in the other individual's thoughts and ideas and manifests this with verbal and nonverbal behaviors. Seeks to include the other in the interaction.

4. Frequently = S usually requests input from the other. S shows interest in knowing the other individual's thoughts and ideas, exhibits verbal and nonverbal behavior to engage the other individual in the interaction; however, there may be at least one instance of lack of attention to the other individual.

3. Sometimes = S only occasionally requests input from the other individual. S shows only some interest towards the other's opinions and only sometimes attempts to include him/her.

2. Rarely = S limits own participation in the interaction to answering or expressing own thoughts, displays very little verbal and nonverbal behavior to include the other in the interaction.

1. Not at All = S limits own participation in the interaction to express her/his own thoughts and does not attempt to engage or include the other.

F. Listens to others (11-12). This item is manifested through verbal and/or nonverbal behaviors. VERBAL: a person's responses indicate that he/she is listening to other individual or answers questions posed by the other. NONVERBAL: turning head in direction of speaker, being attentive, or expressing agreement or disagreement through nodding head and letting speaker finish expressions of thoughts and ideas. Examples of behaviors that would receive low scores (i.e., lack of willingness to listen to the other) include: making statements about things completely not related to the task; making noises or singing/humming while the other is talking; and making statements that clearly ignore the content of what the other has said. **Note:** If others do not say much (i.e., there isn't much to listen to), code a "3".

5. Very often = S expresses verbal and nonverbal behaviors that indicate appropriate listening.

4. Frequently = S expresses verbal and nonverbal behaviors that indicate listening, but is slightly distracted during interaction (may interrupt the other once or twice).

3. Sometimes = S expresses verbal behaviors that indicates listening, but does not give much eye contact to speaker, or S abruptly interrupts speech of the other without letting him/her finish the thoughts, or S is distracted at several times during interactions.

2. Rarely = At some points during the interaction S indicates appropriate verbal and nonverbal listening behaviors, but seems distracted for most of the rest of interaction, or S tends to interrupt the other's speeches abruptly, not letting the other's thoughts and ideas be expressed fully.

1. Not at All = S indicates not listening through inappropriate verbal and nonverbal behaviors, S is distracted at all times, does not care about or ignores issues discussed, or S interrupts the other individual and just wants to be heard.

G. Off-task behavior (13-14). The child and peer are rated in terms of the frequency in which they are engaged in off-task behavior. Displays of off-task behavior/ distraction can be verbal (e.g., discussing topics not related to the task) or nonverbal (e.g., interacting with objects in the environment not related to the task).

5. Very often = S is not engaged in the task at hand. S demonstrates verbal and/or nonverbal behaviors suggesting that S is not focused on the task and instead, preoccupied with other stimuli in the environment.

4. Frequently = S is distracted for most of the interaction. S demonstrates verbal and/or nonverbal behaviors suggesting that S is only engaged in the task at hand 1-2 times.

3. Sometimes = S is distracted several times during the interaction. S demonstrates verbal and/or nonverbal behaviors suggesting that S is not engaged in the task at hand approximately half of the time.

2. Rarely = At 1-2 points during the interaction, S appears distracted and demonstrates verbal and/or non verbal behaviors suggesting that S is no longer engaged in the task at hand.

1. Not at All = S remains on task throughout the entire interaction and is not distracted at any time.

H. Receptive to statements made by the other individual (15-16). The child and peer are rated in terms of being open and permeable to the other individual's thoughts, ideas, and feelings. A receptive individual is willing to change his/her own opinion based on input from others. Openness and receptiveness can be indicated through verbal statements or nonverbal statements that indicate understanding and interest for the other individual. To be rated very high on this code, the individual needs to display good listening behaviors and be responsive and amenable to the other individual's comments. **Note:** If the other individual does not say much, there is nothing to be receptive to; therefore, code a "3

5. Very receptive = S is willing to consider the other individual's thoughts and reflect on them. S incorporates the other's points of view into his/her own statements. S acknowledges the other's points of view.

4. Fairly receptive = S acknowledges the other's viewpoints several times during interaction. ONCE or TWICE, may not be as willing to change own views based on input from others.

3. Somewhat receptive = S considers the other's thoughts, but without commentary (i.e., without accepting or rejecting them, or passively going along with rules suggested by the other), or S seems distracted at some times when the other is presenting his/her thoughts. May not be willing to change own views based on input from others MORE THAN TWO TIMES.

2. Fairly unreceptive = S tends to interrupt the other's speeches, or disagrees with the other's thoughts, or is rather uninterested. Does not seem as open to the other's input.

1. Very unreceptive = S imposes own thoughts and ideas, rejects or does not consider other's feelings, thoughts or ideas. Will not alter own opinions based on input from the other.

I.Mutuality (17). The degree to which the child and peer identify themselves as a dyad with a sense of "we-ness" and reciprocity. This scale assesses the pair's sense of being in a relationship and to what extent they view part of their identity as the "dyad". Mutuality is also reflected in the sense of give and take between the two, acceptance of one another, and commitment to maintaining the relationship. Examples of mutuality may include, issues/ topics referred to in terms of "we", mentioning past memories of togetherness or activities they have done together.

5. Very Often = The dyad displays unmistakably clear, consistent and intense signs of mutuality.

4. Frequently = The dyad displays strong signs of mutuality.

3. Sometimes = The dyad displays moderate signs of mutuality.

2. Rarely = The dyad displays some signs of mutuality.

1. Not at All = The dyad displays no signs of mutuality.

J. Positive Escalation (18). A sequential pattern in which a positive behavior of one individual is followed by a positive behavior of the other and so forth, creating a snowball effect. This measure rates how often positive behaviors of one individual are responded to with positive behaviors from the other. Consecutive chains of positive behaviors are the essential ingredients that must be observed to receive a high value on this code. This means that unrelated positive behaviors in an interaction do not constitute a snowball or spiraling effect. To be rated very high on positive escalation both individuals would not only display a high frequency of positive verbal and nonverbal behaviors, but also give the impression of triggering each other's positive behaviors. Furthermore, such behaviors must be positive both in terms of affect (i.e., the emotional tone a person expresses) and content (i.e., the subject mater).

5. Very Often = The child-peer dyad displays unmistakably clear, consistent, and intense signs of positive escalation (affect and content) throughout a notable portion of the interaction.

4. Frequently = The dyad displays strong signs of positive escalation (affect and content) that are frequent and consistent. A snowballing, back-and-forth effect is clearly present.

3. Sometimes = The dyad displays moderate signs of positive escalation. Isolated incidents (affect or content) of "I'm positive"… "You're positive back" are frequent and/or notable. If there are no signs of a snowballing effect, the dyad cannot receive a score higher than "3". Alternatively, there may be frequent, notable positive escalation that is only content or only affect. Even if the dyad demonstrates snowballing positive escalation, they cannot receive above a "3" if it is only affect or only content.

2. Rarely = The dyad displays some signs of positive escalation. Isolated incidents (affect or content) or "I'm positive"… "You're positive back" are infrequent and/or weak.

1. Not at All = The dyad displays no signs of positive escalation.

K. Maturity (19-20).S makes verbal and nonverbal gestures demonstrating age-appropriate growth and development. To be rated very high on maturity indicates that the individual displays behaviors that indicate an understanding and awareness of the self, relies on reason rather than solely on emotions, and weighs a situation carefully before drawing conclusions. A mature person is open-minded, willing to learn and explore other possibilities, view points and alternatives, and knows his/her limitations. In contrast, an immature person lacks such characteristics and displays babyish and infantile behaviors. For example, speaking in a childlike voice, responding in a developmentally inappropriate way (e.g., pretend crying), or by displaying other gestures that do not seem age appropriate (e.g., excessive giggling or silliness) would warrant a low score on this code. Pseudo-maturity is trying to act like people who are older than you (e.g., play-acting one's values, interests, mannerisms, status behaviors). Such behavior also warrants a low score on this code as pseudo-maturity actually interferes with the development of real maturity. On the outside, individuals with pseudo-maturity look very mature and poised; however, this is a false sense of self and in fact, they do not feel centered and have not learned the skills to be flexible and to deal with frustration.

5. Very Often = S displays a deep awareness and understanding of self throughout the task. Behaviors reflect high level of sophistication, contemplation, and responsiveness. The individual does not engage in behaviors that are immature.

4. Frequently = S typically demonstrates age-appropriate behavior; however, on 1-2 occasions, the individual acts immaturely.

3. Sometimes = S displays behaviors that are appropriate given the individual's age about half of the time.

2. Rarely = At 1-2 points during the interaction, S displays mature behaviors; however, for the most part, S tends to behave in an immature and childish manner.

1. Not at All = S displays behaviors that seem exceedingly childish and inappropriate given the individual's age.

L. Child is Needy (21-22). This code refers to the degree to which the child demands peer attention. A child scoring high on this code is very needy of the peer's attention and care, and actively engages in behaviors designed to elicit attention, assistance or catering from the peer. A child scoring high on this scale is insistent that the peer wait on the child hand and foot, or would display behaviors which suggest that the child does not feel competent in completing a task without peer

assistance. Behaviors eliciting attention from the peer can be either verbal or nonverbal. VERBAL: Child whines, complains or is manipulative in order to get attention or assistance from the peer, or as a way to fulfill his/her demands. NONVERBAL: Child taps peer or physically intrudes at times when peer is not giving the child undivided attention.

5. Very Often = Child engages in behaviors designed to elicit peer attention throughout the task. The child appears to be needy, and does not display self-reliant behavior at any time during the task.

4. Frequently = Child frequently, but not always, appears needy and demanding of peer's attention.

3. Sometimes = On a few occasions the child appears needy, but displays this behavior inconsistently throughout the interaction.

2. Rarely = Child does not appear to be needy, mostly engaging in self-reliant behavior. There is very little evidence that the child is attempting to elicit peer attention to an excessive degree.

1. Not at all = There is no evidence of the child appearing needy. The child does not exhibit this behavior at all during the interaction.

M. Eye Contact (23-24). This item reflects the extent to which the S displays eye contact with the other individual.

5. Very Often = S consistently demonstrates appropriate eye contact throughout the interaction task.

4. Frequently = S demonstrates eye contact but is slightly distracted during interaction (looks away once or twice).

3. Sometimes = S demonstrates eye contact occasionally (approximately half of time).

2. Rarely = S demonstrates eye contact with individual once or twice.

1. Not at All = S does not demonstrate eye contact with individual.

N. Physical Contact (25-26). An individual scoring high on this code engages in physical contact, as evidenced by hand holding or other gestures, such as touching the other's arm or putting an arm around the other during the interactions.

5. Very Often = Individual engages in physical contact with the other throughout the interaction. Contact is abundant, without restraint, and appears to exceed what would be considered typical with regards to the child's age or cultural group.

4. Frequently = Individual frequently, but not always, engages in physical contact with the other.

3. Sometimes = On a few occasions, the individual exhibits physical contact. The individual engages in some physical contact; however, some of the time s/he also appears to keep to him/herself.

2. Rarely = Individual mostly refrains from engaging in physical contact with the other.

1. Not at All = There is no evidence of physical contact between the child and peer.

II. CONFLICT

O. Level of conflict within dyad (27). Conflict between the child and peer may be manifested verbally and/or nonverbally during interaction. VERBAL: statements that indicate that one person overreacts towards other person; being verbally defensive in relation to issue discussed and not taking responsibility for own actions or thoughts; interrupting abruptly another individual's speech to impose own ideas; speaking loudly to another individual of triad. NONVERBAL: looking bothered, body gesture expressions of excitement or hesitation, tension between child-peer dyad. **Note:** an amicable conflict (e.g., dyad is supportive of each individual despite the conflict, mood continues to be relatively light even with the conflict) would be scored lower than a disagreeable conflict. If there is no conflict during the interaction, code a "1".

5. Very Often = The child-peer dyad are against each other (at least one individual is attacking the other), the mood is very tense and they express several verbal and nonverbal indications of this tension.

4. Frequently = The child-peer dyad seem to be polarized in relation to issues, some verbal and nonverbal indications of conflict are expressed, interaction is rather tense and communication is difficult.

3. Sometimes = The child-peer dyad demonstrate some verbal or nonverbal indications suggesting difficulties within the relationship. There is some tension in the interaction and/or the relationship.

2. Rarely = The dyad seems to have some difference that they take seriously and one of the individuals gives a verbal or nonverbal indication of it. However, there is a rather good mood between the child and peer and issues are discussed well.

1. Not at All = The dyad discusses issues appropriately, differences seem easy to solve and there is a good mood between the child and peer.

P. Tolerates differences and disagreements (28-29). The ability to be tolerant of disagreements during an interaction and a willingness to engage in discussions about such differences. A tolerant S is one who is able to react nondefensively when others disagree with him/her. Can be indicated through verbal and nonverbal behaviors. VERBAL: S reacts nondefensively to disagreements, or S expresses a wish or a willingness to discuss a particular issue about which there is a disagreement, or S maintains the focus of conversation during a disagreement. NONVERBAL: S interacts with the other individual during a disagreement, looks in direction of the individual who disagree with him/her, S does not look surprised about differences suggested. **Note:** If there are no disagreements during the task, then rate a "5", since the absence of disagreements implies that child-peer dyad are being tolerant

5. Very Often = S is always tolerant of disagreements, reacts nondefensively when the other individual disagrees with him/her, is comfortable discussing disagreements.

4. Frequently = S is comfortable discussing disagreements and typically reacts nondefensively, but S indicates on one or two occasions a wish not to discuss an issue during an interaction or reacts defensively on at least one occasion.

3. Sometimes = S is sometimes comfortable discussing disagreements and is sometimes tolerant of the other individual disagreeing with him/her. But there are several instances where S reacts defensively or shows an unwillingness to discuss the disagreement.

2. Rarely = S is reluctant to discuss differences and disagreements, S often reacts defensively when the other individual disagrees with him/her, S frequently changes focus of issues discussed during a disagreement.

1. Not at All = S clearly does not want to discuss differences or disagreements, negates all problems or difficulties in relation to disagreements, S does not

participate during disagreements, S frequently reacts defensively to others' disagreements.

Q. Withdrawal from conflict (30-31). Withdrawal from conflict is affect and behavior designed to withdraw from or avoid engaging in conflict with the other individual. The S may evade the issue, retreat, back off, or may seem to pull him/herself out of the interaction. Examples of withdrawal include turning body away, increasing physical distance from the others, is unresponsive to other, says "I don't want to talk", or ends conversation. **Note:** If there is no conflict, withdrawal does not occur and therefore, code a "1".

5. Very Often = S is completely withdrawn during interaction.

4. Frequently = S displays frequent and/or strong signs of withdrawal.

3. Sometimes = S displays moderate signs of withdrawal or notable signs or withdrawal that are inconsistent and/or infrequent.

2. Rarely = S displays some weak or infrequent signs of withdrawal.

1. Not at All = S displays no signs of withdrawal. S is engaged in the discussion/ conflict throughout the entire interactions.

R. Negative Escalation (32). A sequential pattern in which a negative behavior of one individual is followed by a negative behavior of the other and so forth, creating a snowball effect. This measure rates how often negative behaviors of one individual are responded to with negative behaviors from the other. Consecutive chains of negative behaviors are the essential ingredients that must be observed to receive a high value on this code. This means that unrelated negative behaviors in an interaction do not constitute a snowball or spiraling effect. To be rated very high on negative escalation both individuals would not only display a high frequency of negative verbal and nonverbal behaviors, but also give the impression of triggering each other's negative behaviors. Furthermore, such behaviors must be negative both in terms of affect (i.e., the emotional tone a person expresses) and content (i.e., the subject mater). **Note:** If negative affect is not present during an interaction, negative escalation will not occur and therefore, code a "1".

5. Very Often = Child-peer dyad displays unmistakably clear, consistent, and intense signs of negative escalation (affect and content) throughout a notable portion of the interaction.

4. Frequently = Dyad displays strong signs of negative escalation (affect and content) that are frequent and consistent. A snowballing, back-and-forth effect is clearly present.

3. Sometimes = Dyad displays moderate signs of negative escalation. Isolated incidents (affect or content) of "I'm negative"… "You're negative back" are frequent and/or notable. If there are no signs of a snowballing effect, the dyad cannot receive a scores higher than "3". Alternatively, there may be frequent, notable negative escalation that is only content or only affect. Even if the dyad demonstrates snowballing negative escalation, they cannot receive above a "3" if it is only affect or only content.

2. Rarely = Dyad displays some signs of negative escalation. Isolated incidents (affect or content) or "I'm negative"… "You're negative back" are infrequent and/or weak.

1. Not at All = Dyad displays no signs of negative escalation.

S. Attempted resolution of issues (33-34). The child and peer are working toward resolution of issues when they make suggestions to change or work on current disagreements and differences. Such a dyad demonstrates flexibility and an interest in resolving differences. **Note:** If there are no conflicts, then code "5", since the absence of conflict implies resolution of issues.

5. Very Often = S consistently provides suggestions for how to resolve differences as well as suggestions for how to implement change.

4. Frequently = S provides suggestions for how to resolve some issues and shows an interest in working with them.

3. Sometimes = S provides some suggestions and shows some interest in working on resolution or S does not give suggestions, but shows some willingness to work on suggestions given by others.

2. Rarely = S provides few solutions and does not show an interest in working towards any suggestion given by another individual or S does not give suggestions and shows little willingness to work on suggestions given by others.

1. Not at All = S does not give suggestions and does not show any interest in working towards resolution.

III. AFFECT

T. Intensity of positive affect expression/emotionality (35-36). The extent to which S is expresses positive emotion. Judge emotionality on a continuum from very emotional/animated to emotionally flat/subdued. An S who is very emotional may be very happy, excited, animated, and enthusiastic. An S who is emotionally flat typically will speak in a monotone and will express no emotions of any kind. You are looking for the intensity of positive affect. **Note:** This code refers to the general affect of the individual, whereas, the code for warmth, refers to the individual's expression of positive affect towards another individual.

5. Very Often = S expresses a high level of positive emotion with considerable intensity during all of the interaction. This S is very animated and "alive."

4. Frequently = S demonstrates positive emotion during most of the interaction. Although this S is fairly emotional most of the time, there are periods where the S is less animated than at other times.

3. Sometimes = S expresses positive emotions during the interaction, but these emotions are not expressed very intensely. This S is animated upon occasion but is subdued at other times.

2. Rarely = S tends not to express positive emotions. There may be one or two instances of less intense expressions of positive emotion, but for the most part, this S is emotionally flat during most of the interaction.

1. Not at All = S is emotionally flat during the entire interaction. This S does not express positive emotions of any kind. S tends to speak in a monotone and is subdued during the interaction.

U. Frequency of positive affect (37-38). The frequency S expresses positive emotion. Examples of positive affect include being happy, excited, animated, and enthusiastic.

5. Very Often = Throughout the interaction, S always exhibits positive affect.

4. Frequently = S typically displays positive affect; however, on 1-2 occasions, exhibits negative or neutral affect.

3. Sometimes = S exhibits positive affect approximately half of the time.

2. Rarely = S demonstrates positive affect on only 1-2 occasions.

1. Not at All = Throughout the interaction, S never displays positive affect. S is always neutral or negative.

V. Intensity of negative affect expression/emotionality (39-40). The extent to which S expresses negative emotion. Judge emotionality on a continuum from very emotional/animated to emotionally flat/subdued. An S who is very emotional may be depressed and tearful or very angry and aggressive. An S who is emotionally flat typically will speak in a monotone and will express no emotions of any kind. You are looking for the intensity of negative affect.

5. Very Often = S expresses a high level of negative emotion with considerable intensity during all of the interaction. This S is very animated and "alive."

4. Frequently = S demonstrates negative emotion during most of the interaction. Although this S is fairly emotional most of the time, there are periods where the S is less animated than at other times.

3. Sometimes = S expresses negative emotions during the interaction, but these emotions are not expressed very intensely. This S is animated upon occasion but is subdued at other times.

2. Rarely = S tends not to express negative emotions. There may be one or two instances of less intense expressions of negative emotion, but for the most part, this S is emotionally flat during most of the interaction.

1. Not at All = S is emotionally flat during the entire interaction. This S does not express negative emotions of any kind. S tends to speak in a monotone and is subdued during the interaction.

W. Frequency of negative affect (41-42). The frequency S expresses negative emotion. Examples of negative affect include being depressed, tearful, angry, or aggressive.

5. Very Often = Throughout the interaction, S always exhibits negative affect.

4. Frequently = S typically displays negative affect; however, on 1-2 occasions, exhibits positive or neutral affect.

3. Sometimes = S exhibits negative affect approximately half of the time.

2. Rarely = S demonstrates negative affect on only 1-2 occasions.

1. Not at All = Throughout the interaction, S never displays negative affect. S is always neutral or positive.

X. Warmth (43-44). This code captures signs of positive connection in the relationship. Warmth can be shown through verbal or nonverbal behaviors. VERBAL: with statements that reflect love, care, and interest towards others' feelings. Displays positive affect towards others verbally. NONVERBAL: tone of voice, touching, smiling, etc. Displays positive affect physically. Seeks proximity. **Note:** This code refers to the individual's expression of positive affect/ warmth towards another individual, whereas, the code for positive affect refers to the overall affect of the individual (not necessarily in relation to the other individual).

5. Very Often = S frequently expresses care, love, and consideration. Frequently smiles in a way that demonstrates caring and love. One overwhelming positive behavior (e.g., a genuine high five) or 3 or more genuine signs of friendliness OR signs of warmth and/or friendly playfulness toward other person are strong and prevalent throughout the interaction. Engaged/ friendly behaviors toward other person include finishing sentences, making the other person feel good, attended to, etc.

4. Frequently = S often expresses care, love, and consideration. Often smiles in a way that demonstrates caring and love. Stronger signs of friendliness more than once (e.g., a truly playful punch, a genuinely friendly joke).

3. Sometimes = S occasionally expresses care, love, and consideration. Upon occasion, will smile in a way that demonstrates caring and love. Somewhat engaged, some instances of friendly playfulness or warmth that occur two or three times, but are not a theme.

2. Rarely = S tends not to express care, love, and consideration. S does not respond to expressions of love or care from the other individual. Rarely smiles in a caring manner. Not very engaged with the other individual, but with a couple of extremely minimal signs that might indicate some warmth.

1. Not at All = S is not caring and is not considerate of the other individual. S is not a loving individual. Never smiles in a caring or loving manner. No real signs of friendliness, may be highly engaged with the task (or not) but not with the other person.

Y. Supportiveness (45-46). DO NOT CODE "ACQUIESCENCE" (i.e., "giving in" to another individual) AS SUPPORTIVENESS. Supportiveness focuses on positive listening skills and speaking skills that demonstrate support and understanding to the other individual. Close synonyms for this include encouragement,

acknowledgement, and acceptance. **Note:** If a child/peer is "neutral" (i.e., neither critical nor supportive) but participates in the task, then score a "3".

5. Very Often = S consistently supports and compliments the other individual, physically touches the other in a supportive manner (i.e., touching on the back or holds other's hand), agrees with the other's positions, or defends the other's position. Never judgmental or critical.

4. Frequently = S is often encouraging and approving of the other individual. Often will compliment others.

3. Sometimes = S is somewhat encouraging and approving of the other individual. Occasionally judgmental or critical, or sometimes will compliment others.

2. Rarely = S sometimes ignores the other individual or criticizes the other's thoughts, feelings, and actions. Fairly critical.

1. Not at All = S is very rejecting of the other's thoughts, feelings, and actions and frequently ignores the other. Very critical.

Z. Humor and laughter (47-48). Determine how much the child and peer use joking, laughing, smiling, humor, or playfulness **to improve the mood of the dyad.** Humor that is not intended to be funny, but is mean spirited, should not be considered for this code. **Note:** Rate smiling as "lower" in degree than joking and laughing.

5. Very often = S laughs or tells jokes often in relation to issue discussed. Enjoys interaction. Laughs and smiles very frequently.

4. Frequently = During some of the interaction, S laughs, smiles, or jokes with the other individual in relation to issue discussed.

3. Sometimes = S occasionally makes jokes, laughs, or smiles during the interaction.

2. Rarely = S rarely laughs, jokes, or smiles during the interaction, but he/she may smile.

1. Not at All = S is rather serious throughout the interaction (never smiles).

AA. Anger (49-50). Anger can be expressed verbally or nonverbally. VERBAL: expressing extreme angry and hostile feelings, being defensive, being offensive to the other individual. NONVERBAL: hitting table, standing up abruptly, speaking

loudly, or looking hostile, annoyed, or extremely defensive. **Note:** This code targets both anger and tension, since a rating of "2" can be given to someone who is tense but not necessarily angry.

5. Very Often = S is very agitated, talks loudly, may hit table, looks very bothered during much of the interaction, or displays one intense burst of anger.

4. Frequently = S appears angry or somewhat bothered during several parts of the interaction.

3. Sometimes = S appears, upon occasion, angry or somewhat bothered during some parts of the interaction (once or twice).

2. Rarely = S is mostly calm or relaxed during the interaction. May be somewhat tense but is not angry.

1. Not at All = S discusses issues easily and is relaxed and calm. Never angry.

IV. CONTROL

AB. Dominance (51-52). This code gives an idea of who is "in charge" of the interaction (i.e., who determines what is said or done). Being "in charge" may be assessed based on talking time and agenda setting (i.e., in directing what is talked about). Having an agenda and talking time are weighed equally, but coders should not ignore their overall impression of who was in charge of the process of the discussion. The child or peer can show his/her dominance in terms of his/her ability to influence the other's thoughts, actions, or ideas. Note that this can be done through reasoning or imposing one's thoughts and ideas on another or through one's ability to control. The dominance one individual has can be expressed through the respect that other individual shows for him/her. A person does not have to speak frequently to have considerable control in the dyad. **Note:** An individual who is dominant will also be confident; however, the reverse may or may not be true.

5. Very Often = S has control and his/her ideas and thoughts are taken seriously by the other. S dominates or controls the other individual throughout the interaction, during simple conversation or periods of decision-making.

4. Frequently = S has a consistent influence upon the other individual. S is excessively controlling during many parts of the interaction, but on occasion refrains from interrupting or controlling the other individual in order to allow him/her to express opinions/ solutions.

3. Sometimes = S has input into decisions and his/her decisions may be modified by the other's point of view. S appears to control the other individual only on some occasions.

2. Rarely = S is more likely to be influenced by others; his/her thoughts are not taken into consideration in making decisions.

1. Not at All = S always obeys and on no occasion attempts to control the other individual. S opinions are continually rejected or are not taken into consideration. OR, S may not provide significant input into the discussion.

AC. Pressures others to agree (53-54). An individual pressures others to agree when he/she makes statements that implicitly or explicitly pressure the other individual to change his/her mind by making it uncomfortable for him/her not to do so. Evidence of such pressuring include: when a individual attempts to get the other individual to change his/her mind, indirect pressure (other individual is made to feel stupid if he/she maintains his/her position), expressions of incredulity or condescension, impatience with the other individual's position, and ignoring the input of a individual who disagrees. **Note:** this code reflects the individual's behavior regardless of whether the behavior seemed to strongly affect the other's behavior. For example, if the individual attempts to apply pressure to the other, but the other dismisses his/her attempt, the individual would still receive a high score on this code.

5. Very often = S applies direct or indirect pressure to the other individual to change his/her positions throughout the interaction. Sometimes such pressuring comments are accompanied by anger or hostility. May appear condescending. Pressuring may also be more sporadic but very intense when it occurs.

4. Frequently = On several occasions, S pressures others to change his/her positions. Not hostile or angry, but person who is pressuring may appear annoyed or displeased during the discussion. Or, S may pressure the other on a couple of occasions in a fairly intense manner.

3. Sometimes = On a couple of occasions, S pressures the other to change his/her positions. Pressure is mild with little displeasure during discussion. Or, S may pressure on one occasion but somewhat intensely.

2. Rarely = S tends not to pressure the other to change his/her opinions, tends to respect the other's right to express his/her own points of view. But may on one occasion apply some pressure on the other to change his/her positions. Very mild implied pressure. Pressuring may be mildly intense.

1. Not at All = S never pressures the others to change his/her opinions.

V. COLLABORATIVE PROBLEM SOLVING

AD. Promotion of dialogue and collaboration (55-56). Degree to which the child or peer attempts to promote and facilitate the dialogue, either through asking direct questions of the other individual or through providing a particular type of structure where decision-making and problem-solving is shared ("let's each take a turn trying to come up with a solution..."). "Question asking" is not enough to receive a high score on this code. The questions must promote the dialogue and collaboration in such a way that both the child and peer are jointly involved in the interaction.

5. Very often = S promotes dialogue consistently (S consistently engages the other individual in task-related dialogue). Conversation stays on track. A collaborative atmosphere is present at all times.

4. Frequently = S promotes dialogue frequently. S is often able to "keep the ball rolling" while at the same time sharing decisions with the other. There are some instances of unstructured or "off task" behavior. A collaborative atmosphere is usually present.

3. Sometimes = S occasionally makes attempts to promote dialogue (only half the time). It is just as likely that the S will not make such attempts. A collaborative atmosphere is sometimes present.

2. Rarely = S promotes dialogue infrequently (e.g., in more than half the instances where such promotion could be helpful, the peer is either unaware or unable to do so). The S's attempts to promote dialogue are often stilted or out of place. A collaborative atmosphere is rarely present.

1. Not at All = S does not promote dialogue, questions are not asked of the other individual, hints are not given, communication is indirect, decisions are not shared. A collaborative atmosphere is never present.

VI. SUMMARY CHILD-PEER DYAD MEASURES

AE. Degree of impairment within child-peer dyad (57). Impairment has to do with how well the dyad is able to respond to the task and how well they can communicate and discuss differences.

5. Severe = The dyad is polarized. This is causing problems in communication and in the friendship. Such a relationship appears "stuck."

4. Moderate = The friendship is rather tense. The child and peer have difficulties in relation to many issues, and communication is hard and rough most of the time.

3. Some = The friendship is rather tense. The child and peer have difficulties in relation to some issues, and communication is rough some of the time. On the other hand, such friendships are able to move the conversation along.

2. Slight = The child and peer have certain conflicts with some issues, but they communicate well.

1. Not at All = The child and peer discuss issues smoothly and handles differences well.

AF. General atmosphere of the friendship (58-63). When coding items 58-61, the ideal is a score of "1." For items 62-63, the ideal score is "5." The items are as follows:

58) Overly close, stuck, over concerned with each other (enmeshed)
59) Isolated, disconnected, apathetic towards each other (disengaged)
60) Depression, sadness, hopelessness
61) The frequency in which the child-peer dyad is jointly engaged in off-task behaviors
62) Openness, comfortableness, optimism, and warmth
63) The child and peer are able to reach agreement or resolution

5. Very often = all the time.

4. Frequently = majority of the time.

3. Sometimes = only some of the time.

2. Rarely = infrequently.

1. Not at all = no evidence of this.

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Coder: _____ family#_____
Date: _____

Time (circle)**:** 1 2 3 4 5 **Task** (circle)**:**
Adventure Commercial Toys Conflict

CHILD-PEER INTERACTION MACRO-CODING

I. INTERACTION STYLE

A. Involvement in the task

	Not at All	Rarely	Sometimes	Frequently	Very Often
1. Target child (child with spina bifida)	1	2	3	4	5
2. Peer	1	2	3	4	5

B. Clarity of thought/idea expression

	Very Vague	Fairly Vague	Somewhat Clear	Fairly Clear	Very Clear
3. Target child	1	2	3	4	5
4. Peer	1	2	3	4	5

C. Confidence in stating opinions

	Not at All	Rarely	Sometimes	Frequently	Very Often
5. Target child	1	2	3	4	5
6. Peer	1	2	3	4	5

D. Provides explanations for positions

	Not at All	Rarely	Sometimes	Frequently	Very Often
7. Target child	1	2	3	4	5
8. Peer	1	2	3	4	5

E. Requests input from the other individual

	Not at All	Rarely	Sometimes	Frequently	Very Often
9. Target child requests input from Peer	1	2	3	4	5
10. Peer requests input from target child	1	2	3	4	5

F. Listens to others

	Not at All	Rarely	Sometimes	Frequently	Very Often
11. Target child	1	2	3	4	5
12. Peer	1	2	3	4	5

G. Off-task behavior

	Not at All	Rarely	Sometimes	Frequently	Very Often
13. Target child	1	2	3	4	5
14. Peer	1	2	3	4	5

H. Receptive to statements made by the other individual

	Very Unreceptive	Fairly Unreceptive	Somewhat Receptive	Fairly Receptive	Very Receptive
15. Target child receptive to Peer	1	2	3	4	5
16. Peer receptive to target child	1	2	3	4	5

I. Mutuality

	Not at All	Rarely	Sometimes	Frequently	Very Often
17. Target child-Peer	1	2	3	4	5

J. Positive Escalation

	Not at All	Rarely	Sometimes	Frequently	Very Often
18. Target child- Peer	1	2	3	4	5

K. Maturity

	Not at All	Rarely	Sometimes	Frequently	Very Often
19. Target child	1	2	3	4	5
20. Peer	1	2	3	4	5

L. Child is Needy

	Not at All	Rarely	Sometimes	Frequently	Very Often
21. Target child	1	2	3	4	5
22. Peer	1	2	3	4	5

M. Eye Contact

	Not at All	Rarely	Sometimes	Frequently	Very Often
23. Target child	1	2	3	4	5
24. Peer	1	2	3	4	5

N. Physical Contact

	Not at All	Rarely	Sometimes	Frequently	Very Often
25.Target child to Peer	1	2	3	4	5
26. Peer to Target child	1	2	3	4	5

II. CONFLICT

O. Level of conflict within dyad

	Not at All	Rarely	Sometimes	Frequently	Very Often
27. Target child- Peer	1	2	3	4	5

P. Tolerates differences and disagreements

	Not at All	Rarely	Sometimes	Frequently	Very Often
28. Target child	1	2	3	4	5
29. Peer	1	2	3	4	5

Q. Withdrawal from conflict

	Not at All	Rarely	Sometimes	Frequently	Very Often
30. Target child	1	2	3	4	5
31. Peer	1	2	3	4	5

R. Negative Escalation

	Not at All	Rarely	Sometimes	Frequently	Very Often
32. Target child- Peer	1	2	3	4	5

S. Attempted resolution of issues

	Not at All	Rarely	Sometimes	Frequently	Very Often
33. Target child	1	2	3	4	5
34. Peer	1	2	3	4	5

III. AFFECT

T. Intensity of positive affect expression/emotionality

	Not at All	Rarely	Sometimes	Frequently	Very Often
35. Target child	1	2	3	4	5
36. Peer	1	2	3	4	5

U. Frequency of positive affect

	Not at All	Rarely	Sometimes	Frequently	Very Often
37. Target child	1	2	3	4	5
38. Peer	1	2	3	4	5

V. Intensity of negative affect expression/emotionality

	Not at All	Rarely	Sometimes	Frequently	Very Often
39. Target child	1	2	3	4	5
40. Peer	1	2	3	4	5

W. Frequency of negative affect

	Not at All	Rarely	Sometimes	Frequently	Very Often
41. Target child	1	2	3	4	5
42. Peer	1	2	3	4	5

X. Warmth

	Not at All	Rarely	Sometimes	Frequently	Very Often
43. Target child	1	2	3	4	5
44. Peer	1	2	3	4	5

Y. Supportiveness

	Not at All	Rarely	Sometimes	Frequently	Very Often
45. Target child	1	2	3	4	5
46. Peer	1	2	3	4	5

Z. Humor and laughter

	Not at All	Rarely	Sometimes	Frequently	Very Often
47. Target child	1	2	3	4	5
48. Peer	1	2	3	4	5

AA. Anger

	Not at All	Rarely	Sometimes	Frequently	Very Often
49. Target child	1	2	3	4	5
50. Peer	1	2	3	4	5

IV. CONTROL

AB. Dominance

	Not at All	Rarely	Sometimes	Frequently	Very Often
51. Target child	1	2	3	4	5
52. Peer	1	2	3	4	5

AC. Pressures others to agree

	Not at All	Rarely	Sometimes	Frequently	Very Often
53. Target child	1	2	3	4	5
54. Peer	1	2	3	4	5

V. COLLABORATIVE PROBLEM SOLVING
AD. Promotion of dialogue and collaboration

	Not at All	Rarely	Sometimes	Frequently	Very Often
55. Target child	1	2	3	4	5
56. Peer	1	2	3	4	5

VI. SUMMARY CHILD-PEER DYAD MEASURES

AE. Degree of impairment within child-peer dyad

	None	Slight	Some	Moderate	Severe
57. Impairment	1	2	3	4	5

AF. General atmosphere of the Friendship

	Not at All	Rarely	Sometimes	Frequently	Very Often
58. Overly close, stuck, over concerned with each other (enmeshed)	1	2	3	4	5
59. Isolated, disconnected, apathetic towards each other (disengaged)	1	2	3	4	5
60. Depression, sadness, hopelessness	1	2	3	4	5
61. Child-peer dyad (mutually engaged in off-task behavior)	1	2	3	4	5
62. Openness, comfortableness, optimism, and warmth	1	2	3	4	5
63. The child-peer dyad is able to reach agreement or resolution	1	2	3	4	5

APPENDIX B

QUESTIONNAIRE MEASURES

Directions

The *Adaptive Behavior Assessment System-Second edition* is designed to measure important behaviors an individual displays at home, school, work, and other settings. The behaviors included on this scale range from those suitable for young children to those suitable for adults. Some items may seem too difficult for younger children while others may seem too easy for older children. Therefore, your child is likely to display some but not all behaviors included on this scale.

Please read and answer ALL items

Rate the child according to how often he or she **correctly** performs a behavior, **without help**, when the behavior needs to be displayed. The rating you choose should reflect the frequency with which the
child performs the behavior without help, **when it is needed**. Record your response for each item by circling one of the following:

0 Is Not Able
1 Never or Almost Never When Needed
2 Sometimes When Needed
3 Always or Almost Always When Needed

Then evaluate whether you have observed the behavior or if you are guessing about the frequency of its occurrence. If your rating is based on a guess, put a check (√) in the box marked **Check If You Guessed**. If your answer is based on observation or direct knowledge, leave this column blank.

The following example shows how to complete the Rating Form:

		Behavior Frequency			
	Is Not Able	**Never** When Needed	**Sometimes** When Needed	**Always** When Needed	**Check** If You Guessed
4. Names 20 or more familiar objects.	0	1	2	(3)	☐
5. Tells parents, friends, or others about his/her favorite activities.	0	1	(2)	3	☐
6. Uses sentences with a noun and a verb.	(0)	1	2	3	☑

In the example above, the child has been rated as follows: **Always** (or Almost Always) names 20 or more familiar objects when needed; **Sometimes** tells parents, friends, or others about his/her favorite activities; and **Is Not Able** to use sentences with a noun and a verb. The ratings of Items 4 and 5 are based on observation or direct knowledge; therefore the **Check If You Guessed** column is left blank. The rater guessed on Item 6, so the **Check If You Guessed** column is marked for this item.

The following table is provided to further assist you in filling out this form.

Rating:	**The Child:**
0 **Is Not Able**	• cannot perform the behavior • is too young to have tried the behavior; or • has a physical condition that prevents the behavior
1 **Never** or **Almost Never When Needed**	**Has the ability to perform the behavior, but** • never or almost never does it when needed; or • never or almost never does it on his/her own without being reminded.
2 **Sometimes When Needed**	**Has the ability to perform the behavior, and** • only does it sometimes when needed; • sometimes does it without help, but sometimes needs help; or • sometimes does it on his/her own, but sometimes needs to be reminded.
3 **Always** or **Almost Always When Needed**	**Has the ability to perform the behavior, and** • displays the behavior most or all of the time without being reminded; or • displayed the behavior at a younger age, but has now outgrown it.

Column	**Check this column if:**
Check If You Guessed	• your rating was an estimate. • you have never seen the child in a situation in which the behavior is needed. • the child has not had the opportunity to perform the behavior.

		Behavior Frequency			
Communication	**Is Not Able**	**Never** When Needed	**Sometimes** When Needed	**Always** When Needed	**Check** If You Guessed
1. Says the names of other people, for example, "Mama," "Daddy," or friends' names.	0	1	2	3	☐
2. Shakes head or says "yes" or "no" in response to a simple question, for example, "Do you want something to	0	1	2	3	☐
3. Says "Hello" and "Good-bye" to others.	0	1	2	3	☐
4. Names 20 or more familiar objects.	0	1	2	3	☐
5. Tells parents, friends, or others about his/her favorite activities.	0	1	2	3	☐
6. Uses sentences with a noun and a verb.	0	1	2	3	☐
7. Speaks clearly and distinctly.	0	1	2	3	☐

8. Looks at others' faces when they are talking.	0	1	2	3	☐
9. Pays attention during family discussions for as long as needed.	0	1	2	3	☐

		Behavior Frequency			
Communication *(continued)*	**Is Not Able**	**Never** When Needed	**Sometimes** When Needed	**Always** When Needed	**Check** If You Guessed
10. Answers the telephone appropriately.	0	1	2	3	☐
11. Listens closely for at least five minutes when	0	1	2	3	☐
12. Nods or smiles to encourage others when they are talking.	0	1	2	3	☐
13. Repeats stories or jokes after hearing them from others.	0	1	2	3	☐
14. Says irregular plural nouns, for example, *knives* or *mice.*	0	1	2	3	☐
15. Ends conversations appropriately.	0	1	2	3	☐
16. Takes turns talking during conversations with people—is not too talkative or too quiet.	0	1	2	3	☐
17. Gives verbal instructions that involve two or more steps or activities.	0	1	2	3	☐
18. States his/her own telephone number.	0	1	2	3	☐
19. Starts conversations on topics of interest to others.	0	1	2	3	☐
20. Talks about realistic future educational or career goals.	0	1	2	3	☐
21. Places local telephone calls.	0	1	2	3	☐
22. States home address, including zip code.	0	1	2	3	☐
23. Answers complex questions that require careful thoughts and opinions. For example, questions about politics or	0	1	2	3	☐
24. Uses up-to-date information to discuss current events.	0	1	2	3	☐

		Behavior Frequency			
Functional Academics	**Is Not Able**	**Never** When Needed	**Sometimes** When Needed	**Always** When Needed	**Check** If You Guessed
1. Reads his/her own written name.	0	1	2	3	☐
2. Writes his/her own first and last name.	0	1	2	3	☐
3. States the days of the week in order.	0	1	2	3	☐
4. States time and day of favorite television show.	0	1	2	3	☐
5. Reads and obeys common signs, for example, *Do Not Enter*, *Exit*, or, *Stop*.	0	1	2	3	☐
6. Keeps score when playing games.	0	1	2	3	☐

		Behavior Frequency			
Functional Academics *(continued)*	**Is Not Able**	**Never** When Needed	**Sometimes** When Needed	**Always** When Needed	**Check** If You Guessed
7. Locates important dates on a calendar, for example, birthdays or holidays.	0	1	2	3	☐
8. Reads and follows a daily classroom or work schedule.	0	1	2	3	☐
9. Weighs himself/herself or other objects correctly using a scale.	0	1	2	3	☐
10. Writes his/her own address, including zip code.	0	1	2	3	☐
11. Measures length and height.	0	1	2	3	☐
12. Tells time correctly, using a watch or clock with hands.	0	1	2	3	☐
13. Gives clerk the necessary amount of money when purchasing items.	0	1	2	3	☐
14. Writes letters, notes, or emails.	0	1	2	3	☐
15. Reads menus at restaurants.	0	1	2	3	☐
16. Follows a favorite interest or current event by reading newspapers, books, or other materials.	0	1	2	3	☐
17. Finds somebody's telephone number in the phone book.	0	1	2	3	☐
18. Makes reminder notes or lists.	0	1	2	3	☐
19. Checks for correct change after buying an item.	0	1	2	3	☐

20. Uses a dictionary or encyclopedia to find information.	0	1	2	3	☐
21. Budgets money to cover expenses for at least one week.	0	1	2	3	☐
22. Reads and follows instructions to assemble new purchases.	0	1	2	3	☐
23. Reads classified ads for purchases and services.	0	1	2	3	☐

		Behavior Frequency			
Home Living	**Is Not Able**	**Never** When Needed	**Sometimes** When Needed	**Always** When Needed	**Check** If You Guessed
1. Places dirty cloths in the proper place, for example, a hamper or clothesbasket.	0	1	2	3	☐
2. Wipes up spills at home.	0	1	2	3	☐
3. Picks up and throws away trash or paper at home.	0	1	2	3	☐
4. Assists in big clean-up projects at home, for example, spring cleaning or cleaning the garage.	0	1	2	3	☐

		Behavior Frequency			
Home Living *(continued)*	**Is Not Able**	**Never** When Needed	**Sometimes** When Needed	**Always** When Needed	**Check** If You Guessed
5. Puts things in the proper place when finished using them.	0	1	2	3	☐
6. Keeps toys, games, or other belongings neat and clean.	0	1	2	3	☐
7. Wipes wet or dirty shoes before entering a building.	0	1	2	3	☐
8. Clears the table completely after a meal.	0	1	2	3	☐
9. Sweeps floor.	0	1	2	3	☐
10. Cleans room or living quarters regularly.	0	1	2	3	☐
11. Makes his/her bed.	0	1	2	3	☐
12. Dusts furniture until is it clean.	0	1	2	3	☐
13. Folds clean clothes.	0	1	2	3	☐
14. Makes simple meals that require no cooking, for example, sandwiches or salads.	0	1	2	3	☐
15. Operates a microwave oven.	0	1	2	3	☐

16. Washes dishes either by hand or by placing them in a dishwasher.	0	1	2	3	☐
17. Takes out trash when can is full.	0	1	2	3	☐
18. Uses small electrical appliances, for example, a can opener or blender.	0	1	2	3	☐
19. Cleans bathroom with proper cleaning supplies.	0	1	2	3	☐
20. Uses a clothes dryer.	0	1	2	3	☐
21. Makes minor repairs to personal possessions, for example, bikes or clothes.	0	1	2	3	☐
22. Cooks simple foods on a stove, for example, eggs or canned soup.	0	1	2	3	☐
23. Uses a washing machine to wash clothes.	0	1	2	3	☐
24. Mixes and cooks fairly complex foods on a stove or oven, for example, cake or brownies.	0	1	2	3	☐
25. Performs minor household repairs, for example, a clogged drain or leaky faucet.	0	1	2	3	☐

		Behavior Frequency			
Self-Care	**Is Not Able**	**Never** When Needed	**Sometimes** When Needed	**Always** When Needed	**Check** If You Guessed
1. Uses restroom at home without help.	0	1	2	3	☐
2. Uses a fork to eat solid food.	0	1	2	3	☐
3. Washes hands with soap.	0	1	2	3	☐
4. Brushes teeth.	0	1	2	3	☐
5. Blows or wipes nose with a tissue or handkerchief.	0	1	2	3	☐
6. Drinks liquids without spilling.	0	1	2	3	☐
7. Has pleasant breath.	0	1	2	3	☐
8. Buttons his/her own clothing.	0	1	2	3	☐
9. Puts shoes on correct feet.	0	1	2	3	☐
10. Bathes daily.	0	1	2	3	☐
11. Dresses himself/herself.	0	1	2	3	☐

12. Closes and locks door before using public restroom.	0	1	2	3	□
13. Cleans or brushes himself/herself off if muddy or dirty.	0	1	2	3	□
14. Fastens and straightens clothing before leaving restroom.	0	1	2	3	□
15. Keeps hair neat during the day by brushing or combing.	0	1	2	3	□
16. Ties his/her own shoes.	0	1	2	3	□
17. Uses a public restroom alone.	0	1	2	3	□
18. Washes his/her own hair.	0	1	2	3	□
19. Combines hot and cold water for shower or bath.	0	1	2	3	□
20. Washes and rinses sink after brushing teeth.	0	1	2	3	□
21. Cleans under fingernails.	0	1	2	3	□
22. Gets out of bed on time by himself/herself.	0	1	2	3	□
23. Cuts meats or other foods into bite size pieces.	0	1	2	3	□
24. Cuts or files his/her own fingernails and toenails on a regular basis.	0	1	2	3	□

Self-Direction	Is Not Able	Behavior Frequency: Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed
1. Works on one home or school activity for at least 15 minutes.	0	1	2	3	☐
2. Completes routine household tasks within a reasonable amount of time.	0	1	2	3	☐
3. Stops a fun activity, without complaint, when told that time is up.	0	1	2	3	☐
4. Works independently and asks for help only when necessary.	0	1	2	3	☐
5. Controls anger when another person breaks the rules in games or other fun activities.	0	1	2	3	☐
6. Refrains from telling a lie to escape punishment.	0	1	2	3	☐
7. Controls temper when disagreeing with friends.	0	1	2	3	☐
8. Controls feelings when not getting his/her own way.	0	1	2	3	☐
9. Controls disappointment when a favorite activity is canceled.	0	1	2	3	☐
10. Works hard on assigned tasks or chores that are not liked.	0	1	2	3	☐
11. Keeps working on hard tasks without becoming discouraged or quitting.	0	1	2	3	☐
12. Keeps spending money in pockets, purse, or other safe place.	0	1	2	3	☐
13. Saves money to buy something special, for example, a birthday present or game.	0	1	2	3	☐
14. Puts school and work over leisure activities.	0	1	2	3	☐
15. When leaving home, informs others of destination and return time.	0	1	2	3	☐
16. Completes large home or school projects on time.	0	1	2	3	☐
17. Routinely arrives at places on time.	0	1	2	3	☐
18. Gathers all supplies needed before beginning a cleaning or maintenance project at home.	0	1	2	3	☐
19. Returns on time when requested to be back in one hour.	0	1	2	3	☐
20. Goes out alone unsupervised in daytime.	0	1	2	3	☐
21. Informs teacher in advance, if possible, when absence from school is necessary.	0	1	2	3	☐
22. Cancels fun activity if something more important comes up	0	1	2	3	☐
23. Makes plans for home projects in logical steps.	0	1	2	3	☐

24. Calls family or others when late.	0	1	2	3	☐
25. Plans ahead to allow enough time to complete big projects.	0	1	2	3	☐

Social	Is Not Able	Behavior Frequency: Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed
1. Has one or more friends.	0	1	2	3	☐
2. Has a good relationship with parents and other adults.	0	1	2	3	☐
3. Seeks friendships with others in his/her age group.	0	1	2	3	☐
4. Says "Thank you" when given a gift.	0	1	2	3	☐
5. Says he/she feels happy, sad, scared, or angry.	0	1	2	3	☐
6. Laughs in response to funny comments or jokes.	0	1	2	3	☐
7. Keeps a stable group of friends.	0	1	2	3	☐
8. Stands a comfortable distance from others during conversations (not too close).	0	1	2	3	☐
9. Apologizes if he/she hurts the feeling of others.	0	1	2	3	☐
10. Moves out of another person's way without being asked.	0	1	2	3	☐
11. Shows sympathy for others when they are sad or upset.	0	1	2	3	☐
12. States when others seem happy, sad, scared, or upset.	0	1	2	3	☐
13. Tries to please others by doing something special or giving them a surprise.	0	1	2	3	☐
14. Offers assistance to others.	0	1	2	3	☐
15. Offers to lend belongings to others, for example, clothes or tools.	0	1	2	3	☐
16. Shows good judgment in selecting friends.	0	1	2	3	☐
17. Places reasonable demands on friends (for example, does not become upset when a friend plays with another end).	0	1	2	3	☐
18. Congratulates others when something good happens to them.	0	1	2	3	☐
19. Refrains from saying things that might embarrass or hurt others.	0	1	2	3	☐
20. Offers guests food or beverages.	0	1	2	3	☐
21. Compliments others for good deeds or behavior, for example, honesty or kindness.	0	1	2	3	☐
22. Personally makes or buys gifts for family members on major holidays.	0	1	2	3	☐
23. Listens to friends or family members who need to talk about problems.	0	1	2	3	☐

14

ASEBA

Please print **CHILD BEHAVIOR CHECKLIST FOR AGES 6-18**

For office use only ID #

CHILD'S FULL NAME First Middle Last

CHILD'S GENDER ☐ Boy ☐ Girl | CHILD'S AGE | CHILD'S ETHNIC GROUP OR RACE

TODAY'S DATE Mo.____ Date ____ Yr. ____ | CHILD'S BIRTHDATE Mo.____ Date ____ Yr. ____

GRADE IN SCHOOL ____ NOT ATTENDING SCHOOL ☐

Please fill out this form to reflect *your* view of the child's behavior even if other people might not agree. Feel free to print additional comments beside each item and in the space provided on page 2. ***Be sure to answer all items.***

PARENTS' USUAL TYPE OF WORK, even if not working now. *(Please be specific — for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.)*

FATHER'S TYPE OF WORK _____

MOTHER'S TYPE OF WORK _____

THIS FORM FILLED OUT BY: (print your full name)

_____

Your gender: ☐ Male ☐ Female

Your relation to the child:

☐ Biological Parent ☐ Step Parent ☐ Grandparent

☐ Adoptive Parent ☐ Foster Parent ☐ Other (specify)_____

I. Please list the sports your child most likes to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

☐ None

	Compared to others of the same age, about how much time does he/she spend in each?				Compared to others of the same age, how well does he/she do each one?			
	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average	Don't Know
a. _____	☐	☐	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐	☐	☐
c. _____	☐	☐	☐	☐	☐	☐	☐	☐

II. Please list your child's favorite hobbies, activities, and games, other than sports. For example: stamps, dolls, books, piano, crafts, cars, computers, singing, etc. (Do ***not*** include listening to radio or TV.)

☐ None

	Compared to others of the same age, about how much time does he/she spend in each?				Compared to others of the same age, how well does he/she do each one?			
	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average	Don't Know
a. _____	☐	☐	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐	☐	☐
c. _____	☐	☐	☐	☐	☐	☐	☐	☐

III. Please list any organizations, clubs, teams, or groups your child belongs to.

☐ None

	Compared to others of the same age, how active is he/she in each?			
	Less Active	Average	More Active	Don't Know
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

IV. Please list any jobs or chores your child has. For example: paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores.)

☐ None

	Compared to others of the same age, how well does he/she carry them out?			
	Below Average	Average	Above Average	Don't Know
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

Be sure you answered all items. Then see other side.

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Please print. Be sure to answer all items. 15

V. 1. About how many close friends does your child have? (Do *not* include brothers & sisters)

☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more

2. About how many times a week does your child do things with any friends outside of regular school hours? (Do *not* include brothers & sisters) ☐ Less than 1 ☐ 1 or 2 ☐ 3 or more

VI. Compared to others of his/her age, how well does your child:

	Worse	Average	Better	
a. Get along with his/her brothers & sisters?	☐	☐	☐	☐ Has no brothers or sisters
b. Get along with other kids?	☐	☐	☐	
c. Behave with his/her parents?	☐	☐	☐	
d. Play and work alone?	☐	☐	☐	

VII. 1. Performance in academic subjects. ☐ Does not attend school because _____

	Check a box for each subject that child takes	Failing	Below Average	Average	Above Average
Other academic subjects–for example: computer courses, foreign language, business. Do *not* include gym, shop, driver's ed., or other nonacademic subjects.	a. Reading, English, or Language Arts	☐	☐	☐	☐
	b. History or Social Studies	☐	☐	☐	☐
	c. Arithmetic or Math	☐	☐	☐	☐
	d. Science	☐	☐	☐	☐
	e. _____	☐	☐	☐	☐
	f. _____	☐	☐	☐	☐
	g. _____	☐	☐	☐	☐

2. Does your child receive special education or remedial services or attend a special class or special school?
☐ No ☐ Yes—kind of services, class, or school:

3. Has your child repeated any grades? ☐ No ☐ Yes—grades and reasons:

4. Has your child had any academic or other problems in school? ☐ No ☐ Yes—please describe:

When did these problems start?_____
Have these problems ended? ☐ No ☐ Yes–when?

Does your child have any illness or disability (either physical or mental)? ☐ No ☐ Yes—please describe:

What concerns you most about your child?

Please describe the best things about your child.

Be sure you answered all items.

16

Please print. Be sure to answer all items.

Below is a list of items that describe children and youths. For each item that describes your child ***now or within the past 6 months***, please circle the ***2*** if the item is ***very true or often true*** of your child. Circle the ***1*** if the item is ***somewhat or sometimes true*** of your child. If the item is ***not true*** of your child, circle the ***0***. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 1. Acts too young for his/her age
0 1 2 2. Drinks alcohol without parents' approval (describe):_____
0 1 2 3. Argues a lot
0 1 2 4. Fails to finish things he/she starts
0 1 2 5. There is very little he/she enjoys
0 1 2 6. Bowel movements outside toilet
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention for long
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe):_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains of loneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Cruel to animals
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Daydreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys his/her own things
0 1 2 21. Destroys things belonging to his/her family or others
0 1 2 22. Disobedient at home
0 1 2 23. Disobedient at school
0 1 2 24. Doesn't eat well
0 1 2 25. Doesn't get along with other kids
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Breaks rules at home, school, or elsewhere
0 1 2 29. Fears certain animals, situations, or places, other than school (describe):_____
0 1 2 30. Fears going to school
0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears sounds or voices that aren't there (describe):_____
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Would rather be alone than with others
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, highstrung, or tense
0 1 2 46. Nervous movements or twitching (describe):_____
0 1 2 47. Nightmares
0 1 2 48. Not liked by other kids
0 1 2 49. Constipated, doesn't move bowels
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy or lightheaded
0 1 2 52. Feels too guilty
0 1 2 53. Overeating
0 1 2 54. Overtired without good reason
0 1 2 55. Overweight
56. Physical problems ***without known medical cause:***
0 1 2 a. Aches or pains (***not*** stomach or headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Problems with eyes (***not*** if corrected by glasses) (describe):_____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe):_____

 Be sure you answered all items. Then see other side.

Please print. Be sure to answer all items.

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0 1 2 57. Physically attacks people
0 1 2 58. Picks nose, skin, or other parts of body (describe): _____
0 1 2 59. Plays with own sex parts in public
0 1 2 60. Plays with own sex parts too much
0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy
0 1 2 63. Prefers being with older kids
0 1 2 64. Prefers being with younger kids
0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over; compulsions (describe): _____
0 1 2 67. Runs away from home
0 1 2 68. Screams a lot
0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe): _____
0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Sets fires
0 1 2 73. Sexual problems (describe): _____
0 1 2 74. Showing off or clowning
0 1 2 75. Too shy or timid
0 1 2 76. Sleeps less than most kids
0 1 2 77. Sleeps more than most kids during day and/or night (describe): _____
0 1 2 78. Inattentive or easily distracted
0 1 2 79. Speech problem (describe): _____
0 1 2 80. Stares blankly
0 1 2 81. Steals at home
0 1 2 82. Steals outside the home
0 1 2 83. Stores up too many things he/she doesn't need (describe): _____
0 1 2 84. Strange behavior (describe): _____
0 1 2 85. Strange ideas (describe): _____
0 1 2 86. Stubborn, sullen, or irritable
0 1 2 87. Sudden changes in mood or feelings
0 1 2 88. Sulks a lot
0 1 2 89. Suspicious
0 1 2 90. Swearing or obscene language
0 1 2 91. Talks about killing self
0 1 2 92. Talks or walks in sleep (describe): _____
0 1 2 93. Talks too much
0 1 2 94. Teases a lot
0 1 2 95. Temper tantrums or hot temper
0 1 2 96. Thinks about sex too much
0 1 2 97. Threatens people
0 1 2 98. Thumb-sucking
0 1 2 99. Smokes, chews, or sniffs tobacco
0 1 2 100. Trouble sleeping (describe): _____
0 1 2 101. Truancy, skips school
0 1 2 102. Underactive, slow moving, or lacks energy
0 1 2 103. Unhappy, sad, or depressed
0 1 2 104. Unusually loud
0 1 2 105. Uses drugs for nonmedical purposes (***don't*** include alcohol or tobacco) (describe): _____
0 1 2 106. Vandalism
0 1 2 107. Wets self during the day
0 1 2 108. Wets the bed
0 1 2 109. Whining
0 1 2 110. Wishes to be of opposite sex
0 1 2 111. Withdrawn, doesn't get involved with others
0 1 2 112. Worries
113. Please write in any problems your child has that were not listed above:
0 1 2 _____
0 1 2 _____
0 1 2 _____

Please be sure you answered all items.

CDI

Kids sometimes have different feelings and ideas.
This form lists the feelings and ideas in groups. From each group of three sentences, pick the ***one*** sentence that describes you ***best*** for the past ***two*** weeks**.** After you pick a sentence from the first group, go on to the next group.

There is no right or wrong answer. Just pick the sentence that best describes the way you have been recently. Put a mark like this ☑ next to your answer. Put the mark in the box next to the sentence that you pick.

Here is an example of how this form works. Try it. Put a mark next to the sentence that describes you ***best***.

Example:

I read books all the time. I never read books. I read books once in a while.

Remember, pick out the sentence that describes you best in the PAST TWO WEEKS.

Remember describe how you have been in the past two weeks…	
Item 1 □ I am sad once in a while. □ I am sad many times. □ I am sad all the time.	*Item 8* □ All bad things are my fault. □ Many bad things are my fault □ Bad things are not usually my fault.
Item 2 □ Nothing will ever work out for me. □ I am not sure if things will work out for me. □ Things will work out for me O.K.	*Item 9* □ I do not think about killing myself. □ I think about killing myself, but I would not do it. □ I want to kill myself.
Item 3 □ I do most things O.K. □ I do many things wrong. □ I do everything wrong.	*Item 10* □ I feel like crying everyday. □ I feel like crying most days. □ I feel like crying once in a while.
Item 4 □ I have fun in many things. □ I have fun in some things. □ Nothing is fun at all.	*Item 11* □ Things bother me all the time. □ Things bother me many times. □ Things bother me once in a while.
Item 5 □ I am bad all the time. □ I am bad many times. □ I am bad once in a while.	*Item 12* □ I like being with people. □ I do not like being with people many times. □ I do not want to be with people at all.
Item 6 □ I think about bad things happening to me once in a while. □ I worry that bad things will happen to me. □ I am sure that terrible things will happen to me.	*Item 13* □ I cannot make up my mind about things. □ It is hard to make up my mind about things. □ I make up my mind about things easily.
Item 7 □ I hate myself. □ I do not like myself. □ I like myself.	*Item 14* □ I look O.K. □ There are some bad things about my looks. □ I look ugly.

Remember, describe how you have been in the past two weeks…	
Item 15 □ I have to push myself all the time to do my schoolwork. □ I have to push myself many times to do my schoolwork. □ Doing schoolwork is not a big problem.	*Item 21* □ I never have fun at school. □ I have fun at school only once in a while. □ I have fun at school many times.
Item 16 □ I have trouble sleeping every night. □ I have trouble sleeping many nights. □ I sleep pretty well.	*Item 22* □ I have plenty of friends. □ I have some friends but I wish I had more. □ I do not have any friends.
Item 17 □ I am tired once in a while. □ I am tired many days. □ I am tired all the time.	*Item 23* □ My schoolwork is alright. □ My schoolwork is not as good as before. □ I do very badly in subjects I used to be good in.
Item 18 □ Most days I do not feel like eating. □ Many days I do not feel like eating. □ I eat pretty well.	*Item 24* □ I can never be as good as other kids. □ I can be as good as other kids if I want to. □ I am just as good as other kids.
Item 19 □ I do not worry about aches and pains. □ I worry about aches and pains many times. □ I worry about aches and pains all the time.	*Item 25* □ Nobody really loves me. □ I am not sure if anybody loves me. □ I am sure that somebody loves me.
Item 20 □ I do not feel alone. □ I feel alone many times. □ I feel alone all the time.	*Item 26* □ I usually do what I am told. □ I do not do what I am told most times. □ I never do what I am told.
	Item 27 □ I get along with people. □ I get into fights many times. □ I get into fights all the time.

CSPI

Read each question carefully and PRETEND what it says is happening to you. Then CIRCLE how easy it would be for you to do the things in each question. Some kids your age think these things are hard to do, other kids your age think these things are easy to do. We want you to circle the answer that is really true for you.

Remember, this is not a test and there are no right or wrong answers. Be sure to CIRCLE the answer that is really true for you. Here is an example for you to try:

A. A kid doesn't want you to play. Telling the kid to let you play is _____ for you.

very hard hard easy very easy

1. Some kids want to play a game. Asking them if you can play is _____for you.

very hard hard easy very easy

2. Some kids are arguing about how to play a game. Telling them the rules is _____for you.

very hard hard easy very easy

3. Some kids are teasing your friend. Telling them to stop is _____for you.

very hard hard easy very easy

4. You want to start a game. Asking other kids to play the game is _____ for you.

very hard hard easy very easy

5. A kid tries to take your turn during a game. Telling the kid it's your turn is _____for you.

very hard hard easy very easy

6. Some kids are going to lunch. Asking if you can sit with them is _____for you.

very hard hard easy very easy

7. A kid cuts in front of you in line. Telling the kid not to cut is _____for you.

very hard hard easy very easy

8. A kid wants to do something that will get you into trouble. Asking the kid to do something else is _____for you.

very hard hard easy very easy

9. Some kids are making fun of someone in your classroom. Telling them to stop is _____for you.

very hard hard easy very easy

10. Some kids need more people to be on their teams. Asking if you can be on a team is _____for you.

very hard hard easy very easy

11. You have to carry some things home after school. Asking another kid to help you is _____for you.

very hard hard easy very easy

12. A kid always wants to be first when you play a game. Telling the kid you are going first is _____for you.

very hard hard easy very easy

13. Your class is going on a trip and everyone needs a partner. Asking someone to be your partner is _____ for you.

very hard hard easy very easy

14. A kid does not like your friend. Asking the kid to be nice to your friend is _____for you.

very hard hard easy very easy

15. You are working on a project. Asking another kid to help is _____for you.

very hard hard easy very easy

16. Some kids are deciding what to do after school. Telling them what you want to do is

_____ for you.

very hard hard easy very easy

17. Some kids are planning a party. Asking them to invite your friend is _____for you.

very hard hard easy very easy

18. A kid is yelling at you. Telling the kid to stop is _____for you.

very hard hard easy very easy

FAMILY ENVIRONMENT SCALE (FORM R)

INSTRUCTIONS: The following statements are about families. Please rate your level of agreement for each item in the spaces provided. You may feel that some of the statements are true for some family members and false for others. Provide the rating that is most true for most members of your family.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

_____1. Family members really help and support one another.

_____2. Family members often keep their feelings to themselves.

_____3. We fight a lot in our family.

_____4. We don't do things on our own very often in our family.

_____5. We feel it is important to be the best at whatever you do.

_____6. Activities in our family are pretty carefully planned.

_____7. Family members are rarely ordered around.

_____8. We often seem to be killing time at home.

_____9. We say anything we want to around home.

_____10. Family members rarely become openly angry.

_____11. In our family, we are strongly encouraged to be independent.

_____12. Getting ahead in life is very important in our family.

_____13. We are generally very neat and orderly.

_____14. There are very few rules to follow in our family.

_____15. We put a lot of energy into what we do at home.

_____16. It's hard to "blow off steam" at home without upsetting somebody.

_____17. Family members sometimes get so angry they throw things.

_____18. We think things out for ourselves in our family.

_____19. How much money a person makes is not very important to us.

_____20. It's often hard to find things when you need them in our household.

_____21. There is one family member who makes most of the decisions.

_____22. There is a feeling of togetherness in our family.

_____23. We tell each other about our personal problems.

_____24. Family members hardly ever lose their tempers.

_____25. We come and go as we want to in our family.

_____26. We believe in competition and "may the best man win."

_____27. Being on time is very important in our family.

_____28. There are set ways of doing things at home.

_____29. We rarely volunteer when something has to be done at home.

_____30. If we feel like doing something on the spur of the moment we often just pick up and go.

_____31. Family members often criticize each other.

_____32. There is little privacy in our family.

_____33. We always strive to do things just a little better the next time.

_____34. People change their minds often in our family.

_____35. There is a strong emphasis on following rules in our family.

_____36. Family members really back each other up.

_____37. Someone usually gets upset if you complain in our family.

_____38. Family members sometimes hit each other.

Strongly Disagree Disagree Agree Strongly Agree

1……..……..…….....2…….…….....3…….....…..4

_____39. Family members almost always rely on themselves when a problem comes up.

_____40. Family members rarely worry about job promotions, school grades, etc.

_____41. Family members make sure their rooms are neat.

_____42. Everyone has an equal say in family decisions.

_____43. There is very little group spirit in our family.

_____44. Money and paying bills is openly talked about in our family.

_____45. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.

_____46. Family members strongly encourage each other to stand up for their rights.

_____47. In our family, we don't try that hard to succeed.

_____48. Each person's duties are clearly defined in our family.

_____49. We can do whatever we want to in our family.

_____50. We really get along well with each other.

_____51. We are usually careful about what we say to each other.

_____52. Family members often try to one-up or out-do each other.

_____53. It's hard to be by yourself without hurting someone's feelings in our household.

_____54. "Work before play" is the rule in our family.

_____55. Money is not handled very carefully in our family.

_____56. Rules are pretty inflexible in our household.

_____57. There is plenty of time and attention for everyone in our family.

_____58. There are a lot of spontaneous discussions in our family.

_____59. In our family, we believe you don't ever get anywhere by raising your voice.

_____60. We are not really encouraged to speak up for ourselves in our family.

_____61. Family members are often compared with others as to how well they are doing at work or school.

_____62. Dishes are usually done immediately after eating.

_____63. You can't get away with much in our family.

FRIENDSHIP ACTIVITY QUESTIONNAIRE

Put the name of your very best friend here: _____

We want to ask you some questions just about you and the person you think of as your best
friend so we can know what your best friend is like. We have some sentences that we would like you to read. Please tell us whether this sentence describes your friendship or not. Some of the sentences might be really true for your friendship while other sentences might not be very true
for your friendship. We simply want you to read the sentence and tell us how true the sentence is for your friendship. Remember, there are no right or wrong ways to answer these questions, and you can use any of the numbers on the scale.

After each sentence there is a scale that goes from 1 to 5

"1" means the sentence is probably not true for your friendship
"2" means that it might be true
"3" means that it is usually true
"4" means that it is very true
"5" means that it is <u>really</u> true for your friendship

Circle the number on the scale that is best for you. Be sure to read carefully and answer as honestly as possible.

<u>Example</u>

X1. My friend and I play games and other activities with each other.	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5

1. My friend and I spend a lot of our free time together.	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
2. My friend gives me advice when I need it	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
3. My friend and I do things together	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
4. My friend and I help each other	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
5. Even if my friend and I have an argument, we would still be able to be friends with each other	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5

BE SURE TO THINK ABOUT YOUR BEST FRIEND WHEN YOU ANSWER THESE QUESTIONS

6. My friend and I play together at recess	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
7. If other kids were bothering me, my friend would help me	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
8. Our friendship is just as important to me as it is to my friend	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
9. I can trust and rely upon my friend	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
10. My friend helps me when I am having trouble with something	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
11. If my friend had to move away, I would miss him/her	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
12. If I can't figure out how to do something, my friend shows me how	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
13. Sometimes it seems that I care more about our friendship than my friend does	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
14. When I do a good job at something, my friend is happy for me	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
15. There is nothing that would stop my friend and I from being friends	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
16. Sometimes my friend does things for me or makes me feel special	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
17. When my friend and I have an argument, he/she can hurt my feelings	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
18. When I have not been with my friend for a while, I really miss being with him/her	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
19. If somebody tried to push me around, my friend would help me	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
20. I can get into fights with my friend	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
21. My friend would stick up for me if another kid was causing me trouble	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5

BE SURE TO THINK ABOUT YOUR BEST FRIEND WHEN YOU ANSWER THESE QUESTIONS

22. When we have free time at school, such as at lunchtime or recess, my friend and I usually do something together or spend time with each other	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
23. If I have a problem at school or at home, I can talk to my friend about it	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
24. My friend can bug me or annoy me even though I ask him/her not to	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
25. If I forgot my lunch or needed a little money, my friend would loan it to me	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
26. I think of things for us to do more often than my friend does	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
27. If I said I was sorry after I had a fight with my friend, he/she would still stay mad at me	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
28. My friend helps me with tasks that are hard or that need two people	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
29. My friend and I go to each other's houses after school and on weekends	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
30. Sometimes my friend and I just sit around and talk about things like school, sports, and other things we like	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
31. If I have questions about something, my friend would help me get some answers	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
32. Even if other people stopped liking me, my friend would still be my friend	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
33. I know that I am important to my friend	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
34. My friend would help me if I needed it	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
35. Being friends together is more important to me than it is to my friend	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
36. If there is something bothering me I can tell my friend about it, even if it is something I can not tell to other people	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
37. Things are usually pretty even in my friendship	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5

BE SURE TO THINK ABOUT YOUR BEST FRIEND WHEN YOU ANSWER THESE QUESTIONS

38. My friend puts our friendship ahead of other things	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
39. When I have to do something that is hard, I can count on my friend for help.	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
40. If my friend or I do something that bothers the other one of us, we can make up easily	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
41. My friend and I can argue a lot	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
42. My friend and I disagree about many things	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
43. If my friend and I have a fight or argument, we can say “I’m sorry” and everything will be alright	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
44. I feel happy when I am with my friend	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
45. My friend likes me as much as I like him/her	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5
46. I think about my friend even when my friend is not around	NOT TRUE 1	MIGHT BE TRUE 2	USUALLY TRUE 3	VERY TRUE 4	REALLY TRUE 5

ID# _____ Parent Version Pg.

Friendship Questionnaire

Some kids have a large group of friends and some kids have a small group of friends. I'd like to ask you a few questions about your child's friends.

1. Does your child have friends? (Circle one) Yes or No

2. Does your child have any friends who are relatives—like cousins, aunts, uncles, etc? (Circle one) Yes or No

3. How many friends does your child have? _____

4. How many are boys? _____ How many are girls? _____

5. How many of these friends are "on-line" friends? _____

6. How many of your child's friends have spina bifida? _____

7. How many of your child's friends know that she/he has spina bifida? _____

8. How did your child meet his/her friends? _____
_____

9. Do you wish your child had more friends? (Circle one)
   - All of the time
   - Some of the time
   - Once in a while
   - Never

10. Does your child find it easy to make new friends? (Circle one)
   - Very easy
   - Somewhat easy
   - Somewhat difficult
   - Very difficult

11. Who most often initiates your child spending time with a friend? (Circle one)
   - My child
   - Me or My Spouse
   - My child's friend
   - Friend's parent

12. Who most often plans the activity when your child spends time with a friend? (Circle one)

- My child
- Me or My Spouse
- My child's friend
- Friend's parent

ID # _____

PDQ

1. Today's Date: _____
   Month Day Year

2. Are you this child's:
   1. _____Mother
   2. _____Father
   3. _____Step-mother
   4. _____Step-father
   5. _____Adoptive mother
   6. _____Adoptive father
   7. _____Grandmother
   8. _____Grandfather
   9. _____Other Relation? _____

3. YOUR Date of Birth: _____
   YOUR Age: _____

4. YOUR Ethnicity/Race:
   1. _____White
   2. _____African-American
   3. _____Hispanic
   4. _____Asian
   5. _____Other _____

5. Your SPOUSE'S/SIGNIFICANT OTHER'S Ethnicity/Race:

   1._____White
   2._____African-American
   3._____Hispanic
   4._____Asian
   5._____Other _____

6. Your CHILD'S Date of Birth: _____
   Your CHILD'S Age: _____

7. Your CHILD'S Ethnicity/Race:
   1. _____White
   2. _____African-American
   3. _____Hispanic
   4. _____Asian
   5. _____Other _____

8. Your CHILD'S Grade: _____

   Your CHILD'S School: _____

   Is this a public or private school? _____

9. Are you satisfied with your child's school placement? ____Yes _____No

   If NO, why not?

   _____
_____

10. Please list the FIRST name, sex, and age of all other individuals LIVING IN YOUR HOME. Also, include their relationship to your child (for example, mother, father, step-father, mother's boyfriend, grandmother, brother, sister, step-brother, half-brother, cousin, adopted, etc.)

	FIRST NAME	SEX	AGE	RELATIONSHIP TO YOUR CHILD
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

**Please indicate if a sibling is a "step" or "half" sibling or adopted _____

11. Does your child have any brothers or sisters who are not living with you? If so, please list them:

	FIRST NAME	SEX	AGE	RELATIONSHIP TO YOUR CHILD	WHERE LIVING?
1.		_____	_____	_____	_____
2.		_____	_____	_____	_____
3.		_____	_____	_____	_____
4.		_____	_____	_____	_____

12. What is your CURRENT MARITAL STATUS (please circle one):
    a. **Married** to child's biological father/mother
    b. **Separated** from child's biological father/mother
    c. **Divorced** from child's biological father/mother and not remarried
    d. **Divorced** from child's biological father/mother and remarried
    e. **Divorced** from child's biological father/mother and currently living with a significant other
    f. **Divorced or separated** from child's stepfather/stepmother and not remarried
    g. **Divorced** from child's stepfather/stepmother and remarried
    h. **Widow or widower** and have not remarried
    i. **Widow or widower** and have remarried
    j. **Widow or widower** and currently living with a significant other
    k. **Never married** and currently living with child's biological father/mother
    l. **Never married** and currently living with a significant other
    m. **Never married**
    n. **Other** (please explain) _____

13. Please indicate the years for all of the following that apply to you:

    Year of first marriage (for example: 1989, 2002): _____ _____

    Years of divorces: _____ _____ _____

    Years of remarriages: _____ _____ _____

    Year of death of spouse: _____

14. How long have you and your current SPOUSE / SIGNIFICANT OTHER been married or living together?

    _____Years

15. Check the highest level of education that you completed:
    1. _____some grade school
    2. _____finished grade school
    3. _____some high school
    4. _____finished high school
    5. _____business or technical school
    6. _____some college
    7. _____finished college
    8. _____attended graduate school or professional school after college
    9. _____received a professional degree
    10. _____I am currently enrolled in the following: _____

16. Check the highest level of education that your SPOUSE / SIGNIFICANT OTHER completed:
    1. _____some grade school
    2. _____finished grade school
    3. _____some high school
    4. _____finished high school
    5. _____business or technical school
    6. _____some college
    7. _____finished college
    8. _____attended graduate school or professional school after college
    9. _____received a professional degree
    10. _____S/he is currently enrolled in the following: _____

17. Check the highest level of education you think that your child will complete:
    1. _____some grade school
    2. _____finished grade school
    3. _____some high school
    4. _____finish high school
    5. _____business or technical school
    6. _____some college
    7. _____finish college
    8. _____attend graduate school or professional school after college
    9. _____receive a professional degree

18. What is your religion (if any)? _____

19. How important is religion in your life (please circle one)?
    a. Not at all important
    b. A little important
    c. Somewhat important
    d. Very important
    e. Extremely important

20. Are you a student? _____Yes _____No
If YES, are you a part-time student or a full-time student?

_____part-time student _____full-time student

21. What is your current EMPLOYMENT status (please circle one)?
    a. Full-time homemaker (does not work outside the home)
    b. Retired
    c. On disability form work d. Employed part-time
    e. Employed full-time
    f. Other (please explain) _____

22. If you are EMPLOYED part-time or full-time, please describe your job:

    a. Where do you work? _____

    b. What kind of work do you do? _____

    c. How many hours per week do you work? _____

    d. At what time of day do you usually leave home to go to work (or to school)?

    _____(please specify a.m. or p.m.)

    e. At what time of day do you usually get home after work (or to school)?

    _____(please specify a.m. or p.m.)

    f. Would you say that you are satisfied with your current job?

    _____very satisfied
    _____satisfied
    _____moderately satisfied
    _____moderately dissatisfied
    _____dissatisfied
    _____very dissatisfied

23. Is your SPOUSE / SIGNIFICANT OTHER a student? _____yes _____no

If YES, is s/he a part-time student or a full-time student?

_____part-time student _____full-time student

24. What is your SPOUSE / SIGNIFICANT OTHER's current EMPLOYMENT status (please circle one)?
    a. Full-time homemaker (does not work outside the home)
    b. Retired
    c. On disability form work
    d. Employed part-time
    e. Employed full-time
    f. Other (please explain) _____

25. If your SPOUSE / SIGNIFICANT is EMPLOYED part-time or full-time, please describe his/her job:

a. Where does s/he work?

b. What kind of work does s/he do?

c. How many hours per week do s/he work? _____

d. At what time of day does s/he usually leave home to go to work (or to school)?

_____(please specify a.m. or p.m.)

e. At what time of day does s/he usually get home after work (or to school)?

_____(please specify a.m. or p.m.)

f. Would you say that s/he is satisfied with his/her current job?

_____very satisfied
_____satisfied
_____moderately satisfied
_____moderately dissatisfied
_____dissatisfied
_____very dissatisfied

26. What is your family's total yearly income?

1. _____ under $10, 000
2. _____ 10, 000-19,999
3. _____ 20, 000-29,999
4. _____ 30, 000-39,999
5. _____ 40, 000-49,999
6. _____ 50, 000-59,999
7. _____ 60, 000-69,999
8. _____ 70, 000-79,999
9. _____ 80, 000-89,999
10. _____ 90, 000-99,999
11. _____ 100, 000-109,999
12. _____ 110, 000-119,999
13. _____ 120, 000-129,999
14. _____ 130, 000-139,999
15. _____ 140, 000-149,999
16. _____ 150, 000-159,999
17. _____ 160, 000-169,999
18. _____ 170, 000-179,999
19. _____ 180, 000-189,999
20. _____ 190, 000-199,999
21. _____ over 200, 000

27. During the WEEK (Monday to Friday), how many hours do YOU spend with the child being discussed in this questionnaire, PER DAY, on average (<u>when both of you are awake</u>)? _____

28. During the WEEK (Monday to Friday), how many hours does your SPOUSE / SIGNIFICANT OTHER spend with your child, PER DAY, on average (<u>when both of them</u> <u>are awake</u>)? _____

29. During the WEEK (Monday to Friday), how many hours do your OTHER SIGNIFICANT CAREGIVERS (e.g., grandmother, nanny) spend with your child, PER DAY, on average (when both of them are awake)?_____

30. During the WEEKEND (Saturday and Sunday), how many hours do YOU spend with the child being discussed in this questionnaire, PER DAY, on average (when both of you are awake)? _____

31. During the WEEKEND (Saturday and Sunday), how many hours does your SPOUSE / SIGNIFICANT OTHER spend with your child, PER DAY, on average (when both of them are awake)? _____

32. During the WEEKEND (Saturday and Sunday), how many hours do your OTHER SIGNIFICANT CAREGIVERS (e.g., grandmother, nanny) spend with your child, PER DAY, on average (when both of them are awake)?_____

33. For the child being discussed in this questionnaire, please list the tasks around the house that you expect him/her to perform:_____
_____
_____
_____

34. What tasks related to your child's spina bifida do you perform?

What tasks related to your child's spina bifida does your child perform?

35. My child is receiving special education/school services in the following areas (Please check
ALL that apply):

_____Learning Disabilities resource class or help
_____Learning Disabilities self-contained class
_____Speech/Language resource class or help
_____Speech/Language self-contained class
_____Emotional/Behavioral resource class or help
_____Emotional/Behavioral self-contained class
_____Occupational/Physical Therapy
_____English as a Second Language (ESL)
_____Placement in a Bilingual Classroom…which language? _____
_____Tutoring … what area? _____
_____Other (please explain) _____

36. Has the child being discussed in this questionnaire ever received mental health services
(counseling)? _____yes_____no

37. What, if any, mental health diagnoses has your child been given (e.g., depression, anxiety)?
_____

38. Has anyone else in your family ever received mental health services (counseling)?
_____yes___no

39. Has your child been diagnosed with Attention Deficit Hyperactivity Disorder?
_____yes___no

If YES, who diagnosed your child? _____

40. Has your child ever had any of the following evaluations?

Psychological	_____	yes	_____	no
Neuropsychological	_____	yes	_____	no
Educational	_____	yes	_____	no
Speech/Language	_____	yes	_____	no
Occupational Therapy	_____	yes	_____	no
Physical Therapy	_____	yes	_____	no
Neurological (EEG, MRI	_____	yes	_____	no

41. Has the child being discussed in this questionnaire had any serious medical problems (other
than those related spina bifida)
_____yes _____no

If YES, what were they? _____

_____

42. Family History – Please indicate if the child's relatives have experienced any of the following difficulties:

	Child's Family			Father's Family			Mother's Family		
	Father	Mother	Sibling	Father	Mother	Sibling	Father	Mother	Sibling
Down's Syndrome									
Mental Retardation / Slow Learning									
Learning Disabilities									
Attention Deficits / ADHD									
Language / Speech Problems									
Spina Bifida/ Hydrocephalus									
Sickle Cell / Blood Disorders									
Epilepsy / Seizures / Convulsions									
Neurological Problems									
Blindness/Eye Problems									
Hearing Impairment / Ear Problems									
Cancer									
Alcohol Problems									
Drug Problems									
Depression									
Anxiety									
Psychosis / Hallucinations									
Other Emotional / Behavior Problems									
Birth Anomalies (cleft lip, heart/foot problems)									
Problems with the law									

43. Did the child's birth mother experience any difficulties during pregnancy with this child?

_____yes ___no

If yes, please describe these difficulties:

_____

_____

44. Did the child's birth mother experience any difficulties during labor/delivery with this child?

_____yes____no

If yes, please describe these difficulties:

_____

_____

45. Child's birth weight _____ _____

Pounds Ounces

WIAL-C

For the following, first decide what is true for you—the one described on the left or right— and then indicate whether this is just sort of true or really true for you. Thus, for each item, check **only one** of four spaces.

Sample Sentence

	Really True For Me	Sort Of True For Me				Sort Of True For Me	Really True For Me
(a)	_____	_____	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	X	_____
1.	_____	_____	Some kids find it *hard* to make friends	BUT	Other kids find it's pretty *easy* to make friends	_____	_____
2.	_____	_____	Some kids have *a lot* of friends	BUT	Other kids *don't* have very many friends	_____	_____
3.	_____	_____	Some kids would like to have a lot more friends	BUT	Other kids have as many friends as they want	_____	_____
4.	_____	_____	Some kids are always doing things with *a lot* of kids	BUT	Other kids usually do things by *themselves*	_____	_____
5.	_____	_____	Some kids wish that more people their age liked them	BUT	Other kids feel that most people their age *do* like them	_____	_____
6.	_____	_____	Some kids are *popular* with others their age	BUT	Other kids are *not* very popular	_____	_____

PRSCAB

For the following, first decide what is true for your child—the one described on the left or right— and then indicate whether this is just sort of true or really true for your child. Thus, for each item, check **only one** of four spaces.

	Really True For My Child	Sort Of True For My Child	Sample Sentence			Sort Of True For My Child	Really True For My Child
(a)	_____	__X__	My child would rather play outdoors in his/her spare time	OR	My child would rather watch TV	_____	_____
1.	_____	_____	My child is really good at his/her schoolwork	OR	My child can't do the work assigned	_____	_____
2.	_____	_____	My child finds it hard to make friends	OR	For my child it's pretty easy	_____	_____
3.	_____	_____	My child does really well at all kinds of sports	OR	My child isn't very good when it comes to sports	_____	_____
4.	_____	_____	My child is good-looking	OR	My child is not very good-looking	_____	_____
5.	_____	_____	My child is usually well-behaved	OR	My child is often not well-behaved	_____	_____
6.	_____	_____	My child often forgets what he/she learns	OR	My child can remember things easily	_____	_____
7.	_____	_____	My child has a lot of friends	OR	My child doesn't have many friends	_____	_____

	Really True For My Child	Sort Of True For My Child				Sort Of True For My Child	Really True For My Child
8.	_____	_____	My child is better than others his/her age at sports	OR	My child can't play very well	_____	_____
9.	_____	_____	My child has a nice physical appearance	OR	My child doesn't have a nice physical appearance	_____	_____
10.	_____	_____	My child usually acts appropriately	OR	My child would be better if he/she acted differently	_____	_____
11.	_____	_____	My child has trouble figuring out answers in school	OR	My child almost always can figure out the answers	_____	_____
12.	_____	_____	My child is popular with others his/her age	OR	My child is not very popular	_____	_____
13.	_____	_____	My child doesn't do well at new outdoor games	OR	My child is good at new games right away	_____	_____
14.	_____	_____	My child isn't very attractive	OR	My child is pretty attractive	_____	_____
15.	_____	_____	My child often gets in trouble because of things he/she does	OR	My child usually doesn't do things that get him/her in trouble	_____	_____

TRSCAB

For the following, first decide what is true for this child—the one described on the left or right— and then indicate whether this is just sort of true or really true for this child. Thus, for each item, check **only one** of four spaces.

	Really True	Sort Of True	Sample Sentence			Sort Of True	Really True
(a)	_____	__X__	This pupil would rather play outside	OR	My pupil does not like to play outside	_____	_____
1.	_____	_____	This pupil is really good at his/her schoolwork	OR	This pupil can't do the work assigned	_____	_____
2.	_____	_____	This pupil finds it hard to make friends	OR	For this pupil it's pretty easy to make friends	_____	_____
3.	_____	_____	This pupil does really well at all kinds of sports	OR	This pupil isn't very good when it comes to sports	_____	_____
4.	_____	_____	This pupil is good-looking	OR	This pupil is not very good-looking	_____	_____
5.	_____	_____	This pupil is usually well-behaved	OR	This pupil is often not well-behaved	_____	_____
6.	_____	_____	This pupil often forgets what he/she learns	OR	This pupil can remember things easily	_____	_____
7.	_____	_____	This pupil has a lot of friends	OR	This pupil doesn't have many friends	_____	_____

	Really True	Sort Of True				Sort Of True	Really True
8.	_____	_____	This pupil is better than others his/her age at sports	OR	This pupil can't play very well	_____	_____
9.	_____	_____	This pupil has a nice physical appearance	OR	This pupil doesn't have a nice physical appearance	_____	_____
10.	_____	_____	This pupil usually acts appropriately	OR	This pupil would be better if he/she acted differently	_____	_____
11.	_____	_____	This pupil has trouble figuring out answers in school	OR	This pupil almost always can figure out the answers	_____	_____
12.	_____	_____	This pupil is popular with others his/her age	OR	This pupil is not very popular	_____	_____
13.	_____	_____	This pupil doesn't do well at new outdoor games	OR	This pupil is good at new games right away	_____	_____
14.	_____	_____	This pupil isn't very attractive	OR	This pupil is pretty attractive	_____	_____
15.	_____	_____	This pupil often gets in trouble because of things he/she does	OR	This pupil usually doesn't do things that get him/her in trouble	_____	_____

SSRS Parent

Read each item and think about your child's present behavior. Then decide **How Often** your child does the behavior described.

- If your child **Never** does this behavior, circle **0**.
- If your child **Sometimes** does this behavior, circle **1.**
- If your child **Very Often** does this behavior, circle **2**.

There are no right or wrong answers. **Please do not skip any items.**

	How Often?		
	Never	**Sometimes**	**Very Often**
1. Uses free time at home in an acceptable way.	**0**	**1**	**2**
2. Keeps room clean and neat without being reminded.	**0**	**1**	**2**
3. Speaks in an appropriate tone of voice at home.	**0**	**1**	**2**
4. Joins group activities without being told.	**0**	**1**	**2**
5. Introduces herself/himself to new people without being told.	**0**	**1**	**2**
6. Responds appropriately when hit or pushed by other children.	**0**	**1**	**2**
7. Asks sales clerks for information or assistance.	**0**	**1**	**2**
8. Attends to speakers at meetings such as in church or youth groups.	**0**	**1**	**2**
9. Politely refuses unreasonable requests from others.	**0**	**1**	**2**
10. Invites others to your home.	**0**	**1**	**2**
11. Congratulates family members on accomplishments.	**0**	**1**	**2**
12. Makes friends easily.	**0**	**1**	**2**
13. Shows interest in a variety of things.	**0**	**1**	**2**
14. Avoids situations that are likely to result in trouble.	**0**	**1**	**2**
15. Puts away toys or other household property.	**0**	**1**	**2**
16. Volunteers to help family members with tasks.	**0**	**1**	**2**
17. Receives criticism well.	**0**	**1**	**2**
18. Answers the phone appropriately.	**0**	**1**	**2**
19. Helps you with household tasks without being asked.	**0**	**1**	**2**
20. Appropriately questions household rules that may be unfair.	**0**	**1**	**2**
21. Attempts household tasks before asking for your help.	**0**	**1**	**2**
22. Controls temper when arguing with other children.	**0**	**1**	**2**
23. Is liked by others.	**0**	**1**	**2**
24. Starts conversations rather than waiting for others to talk first.	**0**	**1**	**2**
25. Ends disagreements with you calmly.	**0**	**1**	**2**

	Never	Sometimes	Very Often
26. Controls temper in conflict situations with you.	**0**	**1**	**2**
27. Gives compliments to friends or other children in the family.	**0**	**1**	**2**
28. Completes household tasks within a reasonable time.	**0**	**1**	**2**
29. Asks permission before using another family member's property.	**0**	**1**	**2**
30. Is self-confident in social situations such as parties or group outings.	**0**	**1**	**2**
31. Requests permission before leaving the house.	**0**	**1**	**2**
32. Responds appropriately to teasing from friends or relatives of his/her own age.	**0**	**1**	**2**
33. Uses time appropriately while waiting for your help with homework or some other task.	**0**	**1**	**2**
34. Accepts friends' ideas for playing.	**0**	**1**	**2**
35. Easily changes from one activity to another.	**0**	**1**	**2**
36. Cooperates with family members without being asked to do so.	**0**	**1**	**2**
37. Acknowledges compliments or praise from friends.	**0**	**1**	**2**
38. Reports accidents to appropriate persons.	**0**	**1**	**2**

SSRS– Teacher

Read each item and think about this student's behavior during the past month or two. Then decide **How Often** the student does the behavior described.

- If the student **Never** does this behavior, circle **0**.
- If the student **Sometimes** does this behavior, circle **1.**
- If the student **Very Often** does this behavior, circle **2**.

Please do not skip any items. In some cases you may not have observed the student perform a particular behavior. Make an estimate of the degree to which you think the student would probably perform that behavior.

Social Skills

How Often?

	Never	Sometimes	Very Often
1. Controls temper in conflict situations with peers.	**0**	**1**	**2**
2. Introduces herself/himself to new people without being told.	**0**	**1**	**2**
3. Appropriately questions rules that may be	**0**	**1**	**2**
4. Compromises in conflict situations by changing own ideas to reach agreement.	**0**	**1**	**2**
5. Responds appropriately to peer pressure.	**0**	**1**	**2**
6. Says nice things about himself/herself when appropriate.	**0**	**1**	**2**
7. Invites others to join in activities.	**0**	**1**	**2**
8. Uses free time in an acceptable way.	**0**	**1**	**2**
9. Finishes class assignments within time limits.	**0**	**1**	**2**
10. Makes friends easily.	**0**	**1**	**2**
11. Responds appropriately to teasing by peers.	**0**	**1**	**2**
12. Controls temper in conflict situations with	**0**	**1**	**2**
13. Receives criticism well.	**0**	**1**	**2**
14. Initiates conversations with peers.	**0**	**1**	**2**
15. Uses time appropriately while waiting for help.	**0**	**1**	**2**
16. Produces correct schoolwork.	**0**	**1**	**2**
17. Appropriately tells you when he/she thinks you have treated him/her unfairly.	**0**	**1**	**2**
18. Accepts peers' ideas for group activities.	**0**	**1**	**2**
19. Gives compliments to peers.	**0**	**1**	**2**

20. Follows your directions.	**0**	**1**	**2**
21. Puts work materials or school property away.	**0**	**1**	**2**
22. Cooperates with peers without prompting.	**0**	**1**	**2**
23. Volunteers to help peers with classroom tasks.	**0**	**1**	**2**

	Never	**Sometime**	**Very Often**
24. Joins ongoing activity or group without being told to do so.	**0**	**1**	**2**
25. Responds appropriately when pushed or hit by other children.	**0**	**1**	**2**
26. Ignores peer distractions when doing class work.	**0**	**1**	**2**
27. Keeps desk clean and neat without being reminded.	**0**	**1**	**2**
28. Attends to your instructions.	**0**	**1**	**2**
29. Easily makes transition from one classroom activity to another.	**0**	**1**	**2**
30. Gets along with people who are different.	**0**	**1**	**2**

TEACHER'S REPORT FORM FOR AGES 6-18

For office use only
ID #

Your answers will be used to compare the pupil with other pupils whose teachers have completed similar forms. The information from this form will also be used for comparison with other information about this pupil. Please answer as well as you can, even if you lack full information. Scores on individual items will be combined to identify general patterns of behavior. Feel free to print additional comments beside each item and in the spaces provided on page 2. ***Please print, and answer all items.***

PUPIL'S FULL NAME First Middle Last

PUPIL'S GENDER ☐ Boy ☐ Girl | PUPIL'S AGE | PUPIL'S ETHNIC GROUP OR RACE

TODAY'S DATE Mo._____ Date_____ Yr._____ | PUPIL'S BIRTHDATE (if known) Mo._____ Date_____ Yr._____

GRADE IN SCHOOL _____ | NAME AND ADDRESS OF SCHOOL _____

PARENTS' USUAL TYPE OF WORK, even if not working now *(Please be specific — for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.)*

FATHER'S TYPE OF WORK _____

MOTHER'S TYPE OF WORK _____

THIS FORM FILLED OUT BY: (*print your full name*) _____

Your gender: ☐ Male ☐ Female

Your role at the school:

☐ Classroom Teacher ☐ Counselor
☐ Special Educator ☐ Administrator
☐ Teacher's Aide ☐ Other (specify):

I. **For how many months have you known this pupil?** _____ **months**

II. **How well do you know him/her?** 1. ☐ Not Well 2. ☐ Moderately Well 3. ☐ Very Well

III. **How much time does he/she spend in your class or service per week?**

IV. **What kind of class or service is it? (Please be specific, e.g., regular 5th grade, 7th grade math, learning disability, counseling, etc.)**

V. **Has he/she ever been referred for special class placement, services, or tutoring?**

☐ Don't Know 0. ☐ No 1. ☐ Yes — what kind and when?

VI. **Has he/she repeated any grades?** ☐ Don't Know 0. ☐ No 1. ☐ Yes — grades and reasons:

VII. **Current academic performance** — list academic subjects and check box that indicates pupil's performance for each subject:

Academic subject	1. Far below grade	2. Somewhat below grade	3. At grade level	4. Somewhat above grade	5. Far above grade
1. _____	☐	☐	☐	☐	☐
2. _____	☐	☐	☐	☐	☐
3. _____	☐	☐	☐	☐	☐
4. _____	☐	☐	☐	☐	☐
5. _____	☐	☐	☐	☐	☐
6. _____	☐	☐	☐	☐	☐

Be sure you answered all items. Then see other side.

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Please print. Be sure to answer all items.

VIII. Compared to typical pupils of the same age:	1. Much less	2. Somewhat less	3. Slightly less	4. About average	5. Slightly more	6. Somewhat more	7. Much more
1. How hard is he/she working?	❒	❒	❒	❒	❒	❒	❒
2. How appropriately is he/she behaving?	❒	❒	❒	❒	❒	❒	❒
3. How much is he/she learning?	❒	❒	❒	❒	❒	❒	❒
4. How happy is he/she?	❒	❒	❒	❒	❒	❒	❒

IX. Most recent achievement test scores (optional):

Name of test	Subject	Date	Percentile or grade level obtained

X. IQ, readiness, or aptitude tests (optional):

Name of test	Date	IQ or equivalent scores

Does this pupil have any illness or disability (either physical or mental)? ❒ No ❒ Yes— please describe:

What concerns you most about this pupil?

Please describe the best things about this pupil:

Please feel free to write any comments about this pupil's work, behavior, or potential, using extra pages if necessary.

Please print. Be sure to answer all items. 15

Below is a list of items that describe pupils. For each item that describes the pupil ***now or within the past 2 months,*** please circle the ***2*** if the item is ***very true or often true*** of the pupil. Circle the ***1*** if the item is ***somewhat or sometimes true*** of the pupil. If the item is ***not true*** of the pupil, circle the ***0***. Please answer all items as well as you can, even if some do not seem to apply to this pupil.

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 1. Acts too young for his/her age
0 1 2 2. Hums or makes other odd noises in class
0 1 2 3. Argues a lot
0 1 2 4. Fails to finish things he/she starts
0 1 2 5. There is very little that he/she enjoys
0 1 2 6. Defiant, talks back to staff
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention for long
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe): _____
_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains of loneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Fidgets
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Daydreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys his/her own things
0 1 2 21. Destroys property belonging to others
0 1 2 22. Difficulty following directions
0 1 2 23. Disobedient at school
0 1 2 24. Disturbs other pupils
0 1 2 25. Doesn't get along with other pupils
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Breaks school rules
0 1 2 29. Fears certain animals, situations, or places other than school (describe):_____
_____
0 1 2 30. Fears going to school
0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears sounds or voices that aren't there (describe):_____
_____
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Would rather be alone than with others
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, high-strung, or tense
0 1 2 46. Nervous movements or twitching (describe): _____
_____
0 1 2 47. Overconforms to rules
0 1 2 48. Not liked by other pupils
0 1 2 49. Has difficulty learning
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy or lightheaded
0 1 2 52. Feels too guilty
0 1 2 53. Talks out of turn
0 1 2 54. Overtired without good reason
0 1 2 55. Overweight
56. Physical problems ***without known medical cause:***
0 1 2 a. Aches or pains (***not*** stomach or headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Eye problems (***not*** if corrected by glasses) (describe):_____
_____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe):_____
_____
_____

 Be sure you answered all items. Then see other side.

Please print. Be sure to answer all items.

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0 1 2 57. Physically attacks people
0 1 2 58. Picks nose, skin, or other parts of body (describe):_____
_____
0 1 2 59. Sleeps in class
0 1 2 60. Apathetic or unmotivated
0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy
0 1 2 63. Prefers being with older children or youths
0 1 2 64. Prefers being with younger children
0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over; compulsions (describe):_____
_____
0 1 2 67. Disrupts class discipline
0 1 2 68. Screams a lot
0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe):
_____
_____
0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Messy work
0 1 2 73. Behaves irresponsibly (describe):_____
_____
_____
0 1 2 74. Showing off or clowning
0 1 2 75. Too shy or timid
0 1 2 76. Explosive and unpredictable behavior
0 1 2 77. Demands must be met immediately, easily frustrated
0 1 2 78. Inattentive or easily distracted
0 1 2 79. Speech problem (describe):_____
_____
0 1 2 80. Stares blankly
0 1 2 81. Feels hurt when criticized
0 1 2 82. Steals
0 1 2 83. Stores up too many things he/she doesn't need (describe):_____
_____
_____
0 1 2 84. Strange behavior (describe):_____
_____
0 1 2 85. Strange ideas (describe):_____
_____
0 1 2 86. Stubborn, sullen, or irritable
0 1 2 87. Sudden changes in mood or feelings
0 1 2 88. Sulks a lot
0 1 2 89. Suspicious
0 1 2 90. Swearing or obscene language
0 1 2 91. Talks about killing self
0 1 2 92. Underachieving, not working up to potential
0 1 2 93. Talks too much
0 1 2 94. Teases a lot
0 1 2 95. Temper tantrums or hot temper
0 1 2 96. Seems preoccupied with sex
0 1 2 97. Threatens people
0 1 2 98. Tardy to school or class
0 1 2 99. Smokes, chews, or sniffs tobacco
0 1 2 100. Fails to carry out assigned tasks
0 1 2 101. Truancy or unexplained absence
0 1 2 102. Underactive, slow moving, or lacks energy
0 1 2 103. Unhappy, sad, or depressed
0 1 2 104. Unusually loud
0 1 2 105. Uses alcohol or drugs for nonmedical purposes (***don't*** include tobacco) (describe):_____
_____
0 1 2 106. Overly anxious to please
0 1 2 107. Dislikes school
0 1 2 108. Is afraid of making mistakes
0 1 2 109. Whining
0 1 2 110. Unclean personal appearance
0 1 2 111. Withdrawn, doesn't get involved with others
0 1 2 112. Worries
113. Please write in any problems the pupil has that were not listed above.
0 1 2 _____
0 1 2 _____
0 1 2 _____

Please be sure you answered all items.

APPENDIX C

INTERVIEW MEASURES

Friendship Interview

Read the following introduction aloud to the child:

"Some kids have a large group of friends and some kids have a small group of friends. I'd like to ask you a few questions about your friends. Today let's just talk about the friends who you see and play with in school, in the neighborhood, at church and through other activities that you're involved in. Brothers, sisters, cousins, aunts, uncles and other relatives can sometimes be friends, too, so it's ok to include them in our talk today. Please listen to each question and tell me your answer. I'll write down your answer on this sheet of paper. Please remember that there are no right or wrong answers. We'd just like to know about you."

1. Do you have friends?
   (Circle one) Yes or No

2. Do you have any friends who are relatives—like cousins, aunts, uncles, etc? (Circle one) Yes or No

3. How many brothers and sisters do you have? Brothers_____
   Sisters_____

   a. (If appropriate): How many of your brothers/sisters are your friends?_____

(If child answers "No" to #1 & # 2, and does not have any brothers/sisters as friends, skip to #34.)

4. How many friends do you have? _____

5. How many are boys? _____

6. How many are girls? _____

7. How many of these friends are "on-line" friends? _____

8. Do you have any friends who are grown-ups?
   (Circle one) Yes or No

9. How many of your friends have spina bifida? _____

10. How many of your friends know that you have spina bifida? _____

11. How many of your friends have the same ethnic/cultural background as you? _____
[NOTE: If child is younger, or you think he/she may not understand what ethnic/cultural background means, explain that ethnic and cultural background includes African American, Hispanic, White]

12. How many have a different ethnic/cultural background from you? _____

13. What are their ethnicities? (Please list ethnicity and number of friends of that ethnicity)

_____

_____

14. What language(s) do you speak with your friends? _____
(If child only speaks in English with friends skip to #17)

15. How often do you speak English with your friends?
(Circle one)
All of the time
Some of the time
Once in a while
Never

17. How did you meet your friends? _____

_____

_____

18. Do you wish you had more friends?
(Circle one)
All of the time
Some of the time
Once in a while
Never

19. Do you find it easy to make more friends?
(Circle one)
Very easy
Somewhat easy
Somewhat hard
Very hard

20. Not counting school, on how many days over the past week (the last 7 days) did you spend time with a friend or friends?
_____out of 7 days

a. Is this how much time you typically spend time with a friend or friends each week? (Circle one)
Yes
No, I usually spend more time with a friend or friends
No, I usually spend less time with a friend or friends

21. Would you like to spend more time with your friend or friends?
(Circle one)
A lot more time
Somewhat more time
Somewhat less time
A lot less time

22. In general, what do you like to do with your friends? _____
_____
_____

23. Do you ask your friends to do things with you?
(Circle one)
All of the time
Some of the time
Once in a while
Never

24. Do your friends ask you to do things with them?
(Circle one)
All of the time
Some of the time
Once in a while
Never

25. Do you or your friends usually choose which activities you do?
(Circle one)
I usually choose
My friends usually choose

26. Do you have a best friend?
    (Circle one) Yes or No
    (If answer is "No", skip to #34.)

27. Is your best friend a boy or girl?
    (Circle one) Boy or Girl

28. How long have you known your best friend? _____

29. How did you meet your best friend? _____
_____

30. What are your favorite things to do with your best friend? _____
_____

31. Would you rather do things with your best friend, just the two of you?
    (Circle one)
    All of the time
    Some of the time
    Once in a while
    Never

32. Would you rather get together with your best friend when there are other friends around?
    (Circle one)
    All of the time
    Some of the time
    Once in a while
    Never

33. Does your best friend know that you have spina bifida?
    (Circle one) Yes or No

a. (If "yes"): Was it difficult for you to tell them that you have spina bifida?
(Circle one)
Very easy
Somewhat easy
Somewhat difficult
Very difficult

34. Do you have a boyfriend or girlfriend?
(Circle one) Yes or No

a. (If "no"): Do you ever wish that you had a boyfriend/girlfriend?
(Circle one)
Yes
Maybe
No

35. (If no girlfriend/boyfriend, please skip to question # 36.)
If you had a problem with your girlfriend or boyfriend, who would you turn to for help or advice?
(Circle one)
Family
Family and friends equally
Friends
Other – teacher, counselor, coach, etc.

36. (If no brother or sister, please skip to question # 36.)
If you had a problem with your brother or sister, who would you turn to for help or advice?
(Circle one)
Family
Family and friends equally
Friends
Other – teacher, counselor, coach, etc.

37. If you had a problem about schoolwork, who would you turn to for help or advice?
(Circle one)
Family
Family and friends equally
Friends
Other – teacher, counselor, coach, etc.

38. If you were feeling sad, who would you turn to for help or advice?
    (Circle one)
    Family
    Family and friends equally
    Friends
    Other – teacher, counselor, coach, etc.

39. How often do you feel sad?
    (Circle one)
    All the time
    Some of the time
    Once in a while
    Never

    a. What makes you feel sad?_____
    _____

40. How often do you feel lonely?
    (Circle one)
    All the time
    Some of the time
    Once in a while
    Never

    a. What makes you feel lonely?_____
    _____

41. How often do you feel happy?
    (Circle one)
    All the time
    Some of the time
    Once in a while
    Never

    a. What makes you feel happy?_____
    _____

42. How often do you feel mad?
(Circle one)
All the time
Some of the time
Once in a while
Never

a. What makes you feel mad?_____
_____

43. How often do you feel excited?
(Circle one)
All the time
Some of the time
Once in a while
Never

a. What makes you feel excited?_____
_____

44. How often are kids mean to you or tease you?
(Circle one)
All the time
Some of the time
Once in a while
Never

a. If so, what do they do?_____
_____

45. How often are you mean to other kids or tease them?
(Circle one)
All the time
Some of the time
Once in a while
Never

a. If so, what do you do?_____
_____

46. How often do you feel that other kids pretend you aren't there or ignore you on purpose? (Circle one)
    All the time
    Some of the time
    Once in a while
    Never

    a. If so, what do you do?_____
    _____

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II. Friendship Questionnaire **(Target Child Version)**

Read the following introduction aloud to the child:
"Kids can feel closer to some friends than others and can have different reasons for being friends with different people. I'd like to ask you a few questions about(*name of friend*), the friend who is participating in this project with you. Please listen to each question carefully and tell me your answer. I'll write down your answer on this sheet of paper. Please remember that there are no right or wrong answers and that everything you say will be kept private – that means I won't tell anyone what you tell me now. I would like for you to respond as honestly as possible."

1. How close are you to (*name of friend*)? (Please circle a number)

Not Close									Extremely Close
1	2	3	4	5	6	7	8	9	10

2. Is (*name of friend*) your best friend?

(Please circle an option) Yes No

3. How did you meet each other? _____
_____

4. How long have you been friends? _____
_____

5. Who usually comes up with the idea to spend time together? (Please circle an option)

Me My Friend We take turns Other (e.g., parent) _____

6. How often do you spend time with each other? (Please check an option; Query to check that this is time **outside** of class)

_____Every day
_____Several times per week
_____Once per week
_____A couple of times per month
_____Once a month
_____Less than once a month

7. Do you wish you could spend more time together? (Please check an option)

_____Yes
_____No
_____Sometimes

8. Where do you spend time together? _____
_____

9. What kinds of things do you do together? _____
_____

10. Who usually chooses which activities you do together? (Please circle an option)

Me My Friend We decide together Other (e.g., parent) _____

11. What kinds of things do you do together? _____
_____

12. What do you know about (*name of friend*) (e.g., likes, dislikes, personality characteristics)?
_____
_____

13. How many friends, including you, do you think (*name of friend*) has? _____

14. How is this friendship the same as other friendships you have?
_____
_____

15. How is this friendship different than other friendships you have?
_____
_____

16. Why are you friends with (*name of friend*)?
_____
_____

17. What is the best thing about being friends with (*name of friend*)?
_____
_____

18. What is the hardest thing about being friends with (*name of friend*)? (Your answer will remain confidential)

_____

_____

19. Does *(name of friend*) know that you have spina bifida?

(Please circle an option) Yes or No

20. If yes, what have you told (*name of friend*) about spina bifida?

_____

_____

APPENDIX D

SCALE DEFINITIONS AND EXPERT CODER MATERIALS

Macro Scale Composition – Individual Scales

For this portion of the scale development, we are focusing on scales that measure more individual constructs on the peer tasks. In others words, children with SB may have very different social skills, affect, and control than their peers. We want to be able to measure these differences!

Your task is similar to the previous activity:

- Please read the definitions for each scale.
- If you need to be refreshed on the definitions of the Macro items, they are provided.
- Fill out the attached chart to the best of your ability.
    - Please be aware of the "Reverse Coded?" option.
    - Each Macro item should be placed in one scale only.

Construct Definitions:

- **Control: a child demonstrating high control will attempt to take over the interaction by taking more of the time to talk and dominating the decision-making process while influencing the other child to agree with his/her decisions and opinions.**
    - High scores on this scale would indicate high amount of control demonstrated by the child.

- **Prosocial Skills: the child exhibits overt behaviors or characteristics that function to create a positive social interaction with another person. The child may demonstrate confidence, good listening and conversational skills, and age-appropriate behaviors.**
    - High scores on this scale would reflect use of more positive, adaptive social skills by the child.

- **Positive Affect: the child shows emotion indicative of an upbeat, happy mood that facilitates positive, appropriate social interactions with a peer. The child may smile, laugh, and joke while showing an absence of anger, sadness, and frowning.**
    - High scores on this scale would reflect demonstration of more positive emotions by the child.

Macro Item Definitions:

- **Anger:** can be expressed verbally or nonverbally. VERBAL: expressing extreme angry and hostile feelings, being defensive, being offensive to the other individual. NONVERBAL: hitting table, standing up abruptly, speaking loudly, or looking hostile, annoyed, or extremely defensive

- **Confidence in stating opinions:** the extent to which an individual demonstrates confidence in speaking. An individual scoring high on this code is self-reliant and confident when responding to the task demands. S/he responds freely and independently, without relying on verification or approval from another individual. … a confident person does not have to be a dominant person. Confidence refers to level of self-assurance whereas dominance refers to exerting influence or control

- **Dominance:** gives an idea of who is "in charge" of the interaction (i.e., who determines what is said or done). Being "in charge" may be assessed based on talking time and agenda setting (i.e., in directing what is talked about). … The child or peer can show his/her dominance in terms of his/her ability to influence the other's thoughts, actions, or ideas. Note that this can be done through reasoning or imposing one's thoughts and ideas on another or through one's ability to control. The dominance one individual has can be expressed through the respect that other individual shows for him/her.

- **Eye contact:** reflects the extent to which the S displays eye contact with the other individual.

- **Humor and & laughter**: how much the child uses joking, laughing, smiling, humor, or playfulness to improve the mood of the dyad.

- **Listens to others**: manifested by verbal and/or nonverbal behaviors. VERBAL: a person's responses indicate that s/he is listening to other individual or answers questions posed by the other. NONVERBAL: turning head in direction of speaker, being attentive, or expressing agreement or disagreement through nodding head and letting speaker finish expressions of thoughts and ideas.

- **Maturity**: makes verbal and nonverbal gestures demonstrating age-appropriate growth and development.

- **Negative affect**: intensity x frequency: The extent to and intensity of which the child expresses negative emotion

- **Positive affect**: intensity x frequency: The extent to and intensity of which the child expresses positive emotion.

- **Promotion of dialogue and collaboration**: degree to which the child or peer attempts to promote and facilitate the dialogue, either through asking direct questions of the other individual or through providing a particular type of structure where decision-making and problem-solving is shared.

- **Pressures others to agree**: when he/she makes statements that implicitly or explicitly pressure the other individual to change his/her mind by making it uncomfortable for him/her not to do so.

- **Receptive to statements made by other:** being open and permeable to the other individual's thoughts, ideas, and feelings. A receptive individual is willing to change his/her own opinion based on input from others.

- **Requests input from individual:** makes verbal and nonverbal gestures to include the other individual in the interaction, shows clear interest in knowing the other's thoughts and opinions, interested in including the other in the interaction.

PLEASE FILL IN THE FOLLOWING CHART:

Item	**Reverse Coded?***	**Control**	**Prosocial Skills**	**Positive Affect**
Anger				
Confidence in stating opinions				
Dominance				
Eye contact				
Humor & laughter				
Listens to others				
Maturity				
Negative affect: intensity x frequency				
Positive affect: intensity x frequency				
Promotes dialogue and collaboration				
Pressures other to agree				
Receptive to statements made by other				
Requests input from individual				

* Please be aware of items that may fit best with a scale when they are coded in reverse (ex.: if there was a code called "Good Physical Health," an item measuring the number of times a child coughed would be reverse coded.).

Macro Scale Composition – Dyadic Scales

For this portion of the scale development, we are focusing on scales that measure dyadic constructs on the peer tasks. In others words, some Macro items seem to be tapping characteristics of the child and the peer together (instead of the child and the peer separately). Cohesion is by nature a measure of the relationship between people. Conflict is also included here because it is difficult for a child to have a conflict by him/herself.

Your task is similar to the previous activity:

- Please read the definitions for each scale.
- If you need to be refreshed on the definitions of the Macro items, they are provided.
- Fill out the attached chart to the best of your ability.
    - Please be aware of the "Reverse Coded?" option.
    - Each Macro item should be placed in one scale only.

Construct Definitions:

- **Conflict: the social interaction is characterized by argument, disagreement, mutual annoyance, and mistrust, and the pair finds it difficult to manage and resolve disagreements.**
    - High scores on this scale would indicate high levels of conflict behavior as demonstrated by the child.

- **Dyadic Cohesion:** the sense of affection the child experiences with a friend and the strength of the child's bond with the friend that is characterized by caring, support, and interest. **The pair generally appears warm, encouraging, accepting, and well-connected with each other.**
    - High scores on this scale would indicate higher levels of cohesion between the child with SB and the peer.

Macro Item Definitions:

- **Able to reach an agreement/resolution**

- **Attempted resolution of issues:** the child and peer are working toward resolution of issues when they make suggestions to change or work on current disagreements and differences. Such a dyad demonstrates flexibility and an interest in resolving differences.

- **General atmosphere: isolated, apathetic**

- **General atmosphere: openness, warmth, comfortableness, & warmth**

- **Level of conflict within the dyad**: conflict between the child and peer may be manifested verbally and/or nonverbally. VERBAL: statements that indicate that one person overreacts towards other person; being verbally defensive in relation to issue discussed and not taking responsibility for own actions or thoughts; interrupting abruptly another individual's speech to impose own ideas; speaking loudly to another individual of triad. NONVERBAL: looking bothered, body gesture expressions of excitement or hesitation, tension between child-peer dyad

- **Mutuality**: the degree to which the child and peer identify themselves as a dyad with a sense of "we-ness" and reciprocity; also reflected in the sense of give and take between the two, acceptance of one another, and commitment to maintaining the relationship.

- **Negative Escalation**: a sequential pattern in which a negative behavior of one individual is followed by a negative behavior of the other and so forth, creating a snowball effect. This measure rates how often negative behaviors of one individual are responded to with negative behaviors from the other; to be rated very high on negative escalation both individuals would not only display a high frequency of negative verbal and nonverbal behaviors, but also give the impression of triggering each other's negative behaviors.

- **Positive Escalation:** A sequential pattern in which a positive behavior of one individual is followed by a positive behavior of the other and so forth, creating a snowball effect. This measure rates how often positive behaviors of one individual are responded to with positive behaviors from the other; to be rated very high on positive escalation both individuals would not only display a high frequency of positive verbal and nonverbal behaviors, but also give the impression of triggering each other's positive behaviors.

- **Supportiveness:** focuses on positive listening skills and speaking skills that demonstrate support and understanding to the other individual. Close synonyms for this include encouragement, acknowledgement, and acceptance.

- **Tolerates differences and disagreements:** the ability to be tolerant of disagreements during an interaction and a willingness to engage in discussions about such differences. A tolerant child is one who is able to react nondefensively when others disagree with him/her. Can be indicated through verbal and nonverbal behaviors.

- **Warmth:** captures signs of positive connection in the relationship

PLEASE FILL IN THE FOLLOWING CHART:

Item	**Reverse Coded?***	**Conflict**	**Dyadic Cohesion**
Able to reach an agreement/resolution			
Attempted resolution of issues			
General atmosphere: isolated, apathetic			
General atmosphere: openness, warmth, comfortableness, & warmth			
Level of conflict within dyad			
Mutuality			
Negative Escalation			
Positive Escalation			
Supportiveness			
Tolerates differences and disagreements			
Warmth			

* Please be aware of items that may fit best with a scale when they are coded in reverse (ex.: if there was a code called "Good Physical Health," an item measuring the number of times a child coughed would be reverse coded.).

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VITA

The author, Christina Ehrman Holbein, was born on February 6, 1986 in Buffalo, New York to Franz and Susan Ross. She graduated Magna Cum Laude with Honors and Distinction in Psychology from The Ohio State University in June 2008. In December 2012, she graduated with a Masters of Arts in Clinical Psychology from Loyola University Chicago.

Mrs. Holbein is currently pursuing her doctoral degree in Clinical Psychology at Loyola University Chicago. Her research interests are in the area of pediatric psychology, with specific interests in social function and friendships in youth with chronic health conditions and the use of eHealth and mHealth technologies in these populations. She currently resides in Chicago, IL.